

NATIONAL FISHERMAN

APRIL
1956

Stabilized*

Nylon or Dacron by COLUMBIAN

... pioneers of non-raveling cordage!

You can splice and knot Columbian seine twine and rope without losing an inch due to raveling! Even after months of continuous fishing in fresh or salt water, you'll find no fluffing or untwisting... no unlaying of strands. That's because Columbian's exclusive "Stabilization" process makes yarns and strands of nylon or dacron "stay put" — for the life of the rope!

Columbian "Stabilized" Nylon can be furnished in either Filament or Spun construction. Dacron is recommended in the Spun form. Columbian's long experience with both synthetic and Manila fibres has developed a complete selection of the ropes and twines best suited to any fisherman's needs.

FREE! Send for your sample card of Columbian "Stabilized" Nylon and Dacron Seine Twines today. Just write . . .

COLUMBIAN ROPE COMPANY, Auburn "The Cordage City", N.Y.

*Pioneered and developed for the Army Air Force during World War II, "Stabilized" nylon and dacron cordage is made by Columbian, under their Pat. No. 2343892.



"Stabilized" Filament Nylon
or Spun Nylon **ROPE**

Diameters from $\frac{1}{8}$ " up to $\frac{3}{4}$ " on wooden reels in easy-to-handle Colpack cartons. Larger sizes up to $2\frac{1}{4}$ " on wooden reels to full coil and half coil lengths.



"Stabilized" Filament Nylon,
Spun Nylon, or Spun Dacron
SEINE TWINES

Sizes from No. 6 up to No. 330 on hollow tubes for easy dispensing. Twines are also available dyed green.



HE PUT SAFETY FIRST

And Got Economy and Dependability, Too.

GM DETROIT DIESEL

CASE HISTORY No. 556-22

BOAT AND OWNER: 31-foot Gillnetter "Sallie" owned and operated by Robert Carlson, Arlington, Washington.

INSTALLATION: GM "4-51" Detroit Diesel driving 19" x 17" screw through 2:1 reduction.

PERFORMANCE: Owner bought new boat after previous boat blew up. He specified GM Diesel power primarily for safety—but got economy, dependability, too. GM Detroit Diesel was only Diesel that would fit in new boat without redesigning hull. Owner reports GM Detroit Diesel is "lots cheaper on fuel and maintenance. Parts cost less, too."

SAFETY is one big reason why more and more fishermen are switching from gasoline to General Motors Detroit Diesel power. For a GM Detroit Diesel burns less volatile fuel that's a lot safer to have on board.

But that's not the only reason.

For this small, compact, power-packed work horse costs far less to run and maintain than a gasoline engine of comparable power. It burns fewer gallons of cheaper fuel—fits where other Diesels won't—sells for a far lower price than you'd expect to pay for a Diesel.

If you're planning on buying a new boat—or re-powering your present one—you'll be money ahead if you specify a GM Detroit Diesel. Your local distributor or dealer can tell you why. See him soon or write direct for full information.

Single Engines ... 30 to 300 H.P. Multiple Units ... Up to 895 H.P.

Sales, Factory-Engineered Parts and Authorized Service through distributors and dealers in all important marine locations. See your local Telephone Classified Directory or write, wire or phone for name of nearest distributor.

JIMMY DIESEL'S MAINTENANCE TIPS

Got spring fever? Maybe your engines have it too. Your GM Detroit Diesel distributor or dealer can snap 'em out of it with a spring tune-up. And he'll help you set up a preventive maintenance program to keep your engines running right all summer long. Take care of your engines and they'll take care of you. And remember—Preventive Maintenance Doesn't Cost—It Pays.



Jimmy Diesel



DETROIT DIESEL

Engine Division
of General Motors
Detroit 28, Michigan

America's Largest Builder of Diesel Engines

He always wanted to be a fisherman...

now he's **The Tuna Titan**

...meet **JOSEPH J. BOGDANOVICH**

In November of 1952, a lifelong dream was realized when president Joseph J. Bogdanovich saw the start of operations at the Star-Kist Company's new Plant Number Four, at Terminal Island, California—the largest, most modern tuna cannery in the world. The dream was both his and his father's, and it dates back to 1917, when his father, Martin Bogdanovich, within ten years after his arrival in this country from Dalmatia founded the French Sardine Company in Los Angeles harbor.

salt water in his veins for years. As he puts it, "Ever since the age of six I've wanted to be a fisherman. Commercial fishing strikes me as more thrilling and exciting than the average business pursuit and more adventurous than fishing for sport. Even with modern scientific detection developments like radar, there's a thrill in searching out and stalking schools of fish all over the ocean and the excitement is terrific when you spot a school from the crow's nest; there's nothing like it on stream or shore anywhere."

up yet with any machine substitute for the "fish smeller", whose job it is to rub his fingers through the slitted fish belly and reject any questionable smelling carcass).

Extraordinary as this production record may seem, Mr. Bogdanovich is anxious to improve it still further. But like most commercial fishermen, he's disturbed by the economic conditions most fishermen face these days. "It's a



tough life," he says. "The men are away from home anywhere from two weeks to three months at a stretch. It's not a business with the comforts of many other occupations, so it is not particularly attractive to the average American. Here in Southern California—as elsewhere—the love of fishing is usually inherent in a family or a racial group. Fishing fleet owners and operators pretty much come from the same stock, generation after generation and they comprise an intrinsic and extremely important factor of this industry."

Pushing ahead with production plans the way he does, Mr. Bogdanovich seldom takes time off, but when he does, his idea of a vacation is what most people would call a "boatman's" holiday—he likes to go fishing. When he isn't doing that—attending college football games and playing golf come next in order.

Mr. Bogdanovich is married and the father of three sons.

The Pettit Paint Company is proud to print this story of an outstanding American in the fishing industry.

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marine paint

Since 1861

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Belleville, N. J. . . San Leandro, Calif.



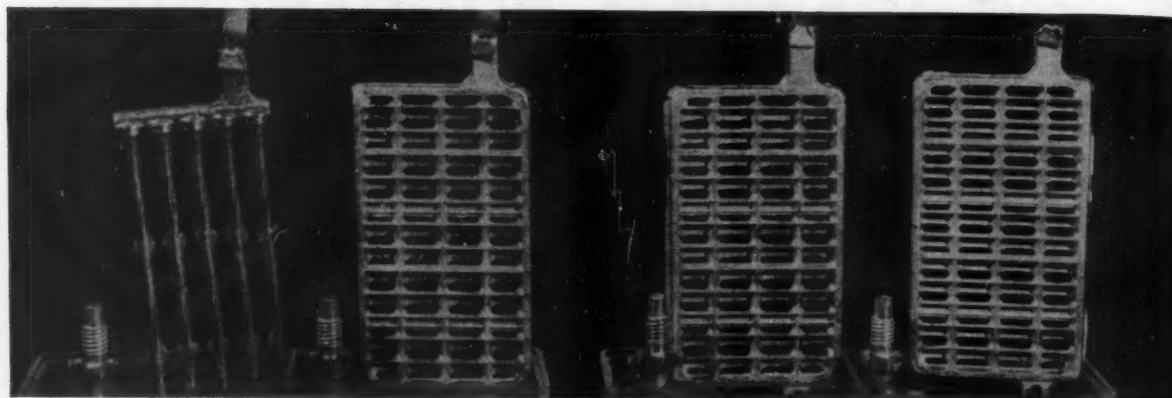
Under Martin's able guidance the company prospered, expanding still further when young Joseph came into the business in 1934 and strongly advocated concentration on national promotion of the relatively little-known "Star-Kist" tuna label. Ten years later Martin Bogdanovich died—at the peak of his career and during a patriotic War Bond rally. Thus, Joseph suddenly found himself at the head of one of the fastest-growing concerns in the fish canning industry.

Although grieved at his father's sudden passing, Joe dug in with the enthusiasm of his years—a quality undiminished to this day. "Joe Bugs" as friendly competitors call him, has had

The 194,000 square feet of space in the mammoth new cannery is light, airy, and designed for maximum assembly-line efficiency. Employing over 828 workers on nine or ten production lines, the plant turns out, during an eight-hour day, 350 tons, 14,000 cases, or 672,000 cans of Star-Kist tuna. From the dockside unloading gear (average weight of fish is ten pounds) to the final labelling of the can, Star-Kist Plant Number Four is a cannery built to process tuna and tuna alone. Result is a production quota far ahead of any other plant in the world today. (Equipment is of the latest and fastest, of course—though even Joe Bogdanovich hasn't been able to come

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For all marine applications

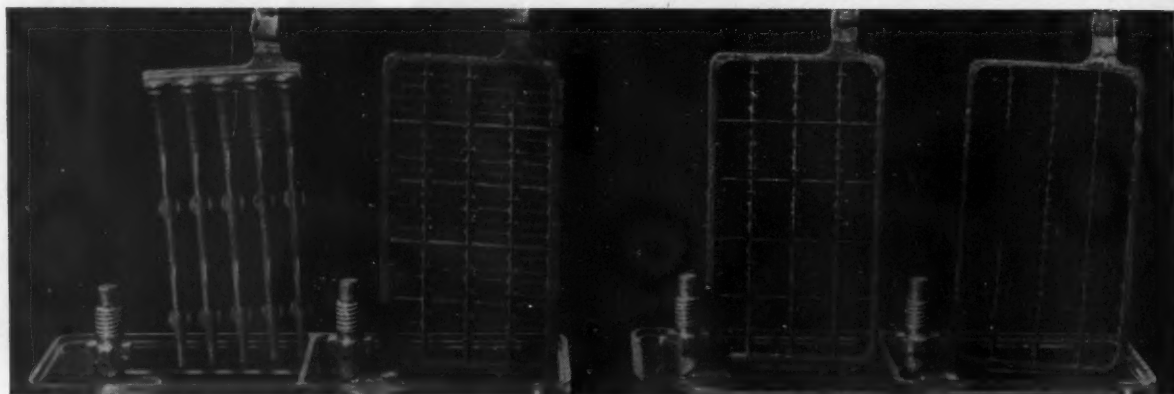


BEFORE: Silvium alloy

Alloy "A"

Alloy "B"

Alloy "C"



AFTER: Note how the Silvium grid resisted corrosion. Compare it with the other alloys.

Corrosion resistant SILVIUM prolongs battery life



BATTERY FOR MARINE SERVICE. Model MV-D. Famous for reliability, Exide-Ironclad Batteries are especially at home in marine applications. When emergencies occur, Ironclad batteries deliver power to meet continuing demands for long periods. Unique construction of positive plate retards flaking, insures long battery life. Write for Bulletin 5190.



Reaching down deep into every Exide-Ironclad Battery are the fingers of Silvium alloy metal which form the grids of the famous Exide-Ironclad positive plates.

Silvium is a special alloy developed by Exide to resist corrosion and thus prolong battery life. For proof, Exide research engineers compared the performance of an Ironclad Silvium grid side by side with ordinary grids of other lead alloys. As the photographs above show, only Silvium came through the test without damaging corrosion—undiminished in size, unimpaired in strength. The other grids showed from moderate to severe corrosion.

Tests have proved that Silvium is not only more resistant to corrosion, but also a better conductor of electricity.

Hence it both prolongs battery life and—because there's less internal battery resistance—more readily permits heavy drafts of power.

This special material is only one of the many exclusive features which have made Exide-Ironclad Batteries world famous for high capacity and long life. When you order batteries for heavy duty applications, or the equipment requiring such batteries, be sure to specify Exide-Ironclad. Write for detailed bulletin. Exide Industrial Division, The Electric Storage Battery Company, Phila. 2, Pa.

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NATIONAL FISHERMAN - APRIL, 1956

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Yearly subscription rates: United States, \$3; Canada, \$4; Foreign, \$5. Single copies, 35¢.

Accepted as Controlled Circulation Publication at Manchester, N. H.

NATIONAL FISHERMAN

The Fishing Industry Magazine
Formerly Atlantic Fisherman, Established 1919.

Fishery Education Bill Would Aid Industry

Widespread support was accorded the Payne Fishery Education Bill at Senate hearings in Washington last month. The proposed legislation would authorize grants of Federal money to public and non-profit institutions for the education and training of technicians and teachers needed in the field of commercial fishing. It also would provide for the creation of a Federal-State extension service for vocational education in the fishery trades.

In speaking for his Bill (S.2379), Senator Frederick G. Payne of Maine stated that a career in fishing today requires a specialized education just as much as any other profession. "The educational problem facing the industry", he said, "is really twofold."

"First, there is an urgent need for training operating personnel for the industry, primarily at the secondary and vocational school level. This training should be practical fisheries training and would probably include techniques, equipment, methods of handling, processing, packing, marketing, as well as developing the ability to intelligently use valuable information developed through research in fish migration, fish characteristics, marine biology, and so on.

"Second, there is a critical need for college level training of competent teachers to meet the primary need, and research technicians to carry on much needed technical work."

The need for highly-trained experts to keep the nations' fisheries abreast of latest developments was recognized at the Senate hearing by Francis W. Sargent, Massachusetts Director of Marine Fisheries.

However, Sargent urged that study be given to the practicability of both altering the major emphasis from a

higher to a lower academic level and providing for more active participation by the States and territories themselves in the preparation of courses and in the utilization of available funds.

Pointing out that the Saltonstall-Kennedy Act now is providing funds for basic research in a wide variety of economic, technological and biological fields related to the seafood industry, Sargent said: "The accumulated knowledge resulting from these studies will prove invaluable over the years, but how to most advantageously present this information to the persons within the industry, becomes an increasingly important question.

"The fundamental goal (of fishery education) is the relaying of pertinent information from the research worker to the man engaged in producing and processing fish and shellfish, and to train that man sufficiently so that he is able to grasp the significance of new information and techniques and apply them to his immediate job."

Today almost every nation in the world that engages in commercial fishing to any appreciable degree has some form of government sponsored educational and training program for the industry, except the United States. In this country very little has been done in the past in this field, but recently there has been an upsurge of interest, partly stimulated by the Payne Bill.

In order to be fully utilized, economic and technical data pertaining to fisheries must be available to industry personnel on the waterfront. Proper dissemination of such knowledge would be one of the most effective means through which the fishing industry could improve its competitive position.

Published monthly by Atlantic Fisherman, Inc., Goffstown, New Hampshire

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President

GARDNER LAMSON
Publisher and Editor

A. E. BROWN
Managing Editor



Member: National Business Publications and
Business Publications Audit of Circulation



Advertising Representatives: Kennedy Associates, 60 East 42nd Street, New York 17, N. Y.
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Moisture-resistant Styrofoam chosen again for boat insulation



The Minorcan is one of many 67' x 18' shrimp trawlers built by Diesel Engine Sales, Inc. of St. Augustine, Florida, using Styrofoam low-temperature insulation. The Minorcan is now owned by Mr. Henry C. Singleton.

In fleet after fleet, its remarkable combination of properties pays off in permanent insulation efficiency

It's easy to see why so many builders of fishing boats use Styrofoam® (a Dow plastic foam). It offers you a combination of properties that is unmatched by any other low-temperature insulation.

Because Styrofoam has superior resistance to water, its low "K" factor stays low. Styrofoam offers excellent compressive strength, light weight, permanent resistance

to vermin and decay, low installed cost, and it won't pack or shift within the walls where it's used. These properties all combine to make Styrofoam the most economical, efficient, trouble-free insulation on the market today. In addition it offers top buoyancy—supports 55 lbs. per cubic foot. For your copy of the Styrofoam data book, contact Plastics Sales Department PL-513J-1. THE DOW CHEMICAL COMPANY, Midland, Michigan.

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ARE YOU READY TO TEST ANTIBIOTICS FOR KEEPING FOODS FRESH LONGER?



**READ HOW PFIZER, PIONEER PRODUCER OF ANTIBIOTICS,
CAN HELP YOU IN THIS DRAMATIC NEW FOOD DEVELOPMENT**

● Every fresh food product is in a race against bacterial spoilage.

Despite refrigeration, despite the most sanitary processing conditions, the race goes on. It affects how far you can distribute and your cost of distribution; how much your dealer can stock, for how long.

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There's a real chance that now you can push back the time margin dividing fresh from spoiled—with antibiotics!

For a number of years thorough Pfizer research has been devoted to this dramatic development in food processing. As the world's largest producer of antibiotics, Pfizer has been able to apply a wealth of experience to developing a successful antibiotic for extending food freshness, plus the technology you need to use it.

EXPERIMENT NOW—PFIZER CAN HELP YOU

Enough comprehensive Pfizer research has now been completed to justify inviting you to make your own controlled tests with the product that has resulted from that research—PFIZER BIOSTAT.* Our technical service men can supply information and assistance.

PFIZER BIOSTAT is a broad-spectrum antibiotic product for food uses. Its chief active ingredient is a special form of oxytetracycline. *In many tests PFIZER BIOSTAT has proved extremely effective in delaying bacterial spoilage, in keeping foods fresher far longer.*

HOW WILL YOU USE BIOSTAT?

In the case of poultry PFIZER BIOSTAT has extended freshness significantly when added to the slush ice in chill tanks. Original flavor, texture and appearance were not affected in any way.

Fish packed in ice made with BIOSTAT stay fresher during long fishing runs. For further protection fillets can be dipped in a BIOSTAT solution.

Dipping, spraying, and pre-slaughter injection are all successful methods of prolonging the freshness of meats with BIOSTAT. Meat so treated not only keeps longer but also can be aged at higher temperatures to allow rapid tenderizing by its natural enzymes.

Pfizer believes antibiotics will gradually take an important place among older methods of keeping foods fresh. Test this use of antibiotics now. Mail the coupon.

*BIOSTAT is a trademark of Chas. Pfizer & Co., Inc.

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Vernon, Calif.; Atlanta, Ga.; Dallas, Texas

Manufacturing Chemists for Over 100 Years

CHAS. PFIZER & CO., INC., Technical Service Dept.
630 Flushing Ave., Brooklyn 6, N. Y.

Please send me:

- ☐ Technical data on antibiotics for food uses;
☐ A test sample of BIOSTAT formulated for:

(poultry chill tank • antibiotic ice • other)

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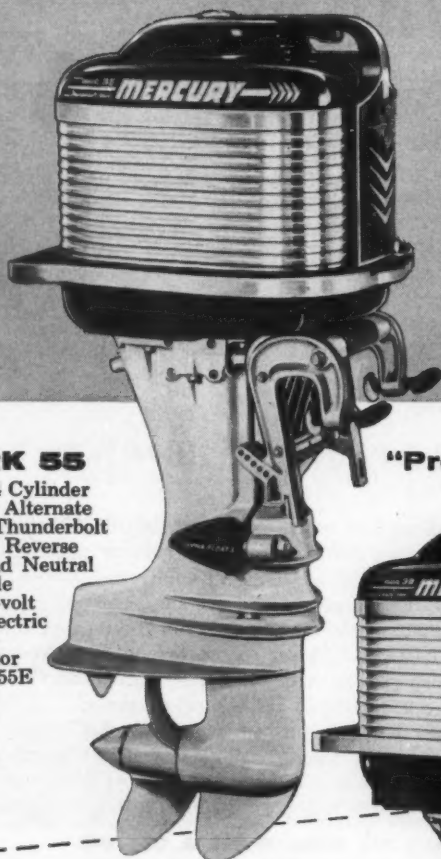
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MERCURY**
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40 h.p. 4 Cylinder
in Line, Alternate
Firing Thunderbolt
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Available
with 12-volt
MercElectric
Starter-
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(Mark 55E
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FULL JEWELLED POWER —
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MOLLY STEEL CONNECTING RODS** —
for matchless durability!



**WATERPROOF MAGNETO AND
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shrug off bad weather!



**UNI-CAST
ONE-PIECE
GEAR HOUSING** —
for extra strength,
permanent alignment of
shafts, bearings and gears!

DYNA-FLOAT SUSPENSION —
aircraft type rubber
mounts, in shear, to
keep all vibration
from boat!



COMPLETE ENGINE SILENCING —
keeps Mercury quiet
without loss of power
or performance!



Up to 25% More Miles Per Gallon!
Triple-checked tests prove Mark 30
delivers as much as 25% more miles per
gallon than competitive 30 h.p. outboards,
uses less fuel per hour, less oil per
gallon! The difference in operating cost
could pay for a Mark 30 in as little
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MARK 30 Turbo 4

World's First 30 h.p. Alternate Firing Four!
Reverse Gear and Neutral. Available with 12-volt
MercElectric Starter-Generator (Mark 30E model)

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NATIONAL FISHERMAN - APRIL, 1956

► National Fisheries Policy Favored

Senate hearings last month on Bill S.3275 which would create new 5-man U. S. Fisheries Commission, produced divergent opinions. The Bill's provision for a strong statement of policy on the importance of commercial fisheries received general support.

The provision for the Commission to take over duties of the Fish & Wildlife Service evoked various proposals, including separation of fish and wildlife activities, separation of commercial and sport fishing, creation of assistant secretary of Interior for Fisheries, transfer of Fish & Wildlife Service to Department of Commerce, and placing of a Fisheries Commission under Interior or Commerce Departments.

► Registration of Haddock Boats

Significant changes in regulations for haddock conservation, including a requirement for registration of vessels engaged in haddock fishing, were proposed at a recent meeting in Boston, Mass. of U. S. representatives to International Commission for Northwest Atlantic Fisheries and their New England Advisory Committee. The proposed changes would apply only to American vessels fishing in Subarea 5, extending from Block Island to the Bay of Fundy, Nova Scotia, and including Browns Bank, Georges Bank and the Gulf of Maine. Purpose of the proposed changes in regulations is to strengthen enforcement.

By registration, a means of determining those vessels which are engaged in haddock fishing would be available, making them amenable to regulation. Licenses or certificates could be revoked, or fines could be imposed on violators. Registered haddock vessels would be open for inspection of gear and equipment any time, and would be required to possess only the legal mesh size net on board.

Another proposed change is that vessels landing less than 10 percent of haddock annually, need not register for a haddock fisheries permit, and may carry other nets than the legal-sized mesh. The new proposals will be submitted for adoption at the annual meeting of the International Commission in Ottawa in June.

► Stabilization Bill Has Hearing

Senate Bill 3339, which would provide for a Fisheries Stabilization Corporation, received varied reactions at hearings in March. It would authorize loans to fishermen and conduct continuing studies of imports in relation to supplies of domestic fish.

Thomas D. Rice of Massachusetts Fisheries Assoc. looks upon Bill as panacea to cure industry's ills and stabilize commercial fisheries. Charles R. Carry of California Fish Cannery Assoc. believes it would in-

ject the Federal Government much further into the industry than is desirable.

John F. Linehan of New Bedford Seafood Producers Assoc. claims the Stabilization "Bill recognizes the close relationship between the economy of the industry and the import problem, and that one cannot be divorced from the other. W. M. Chapman of American Tunaboat Assoc. stated that it would give fishermen the sort of assistance that is being given to farmers.

► Canned Tuna in Brine Duty Upped

An increase in the import duty of canned tuna in brine from 12½ percent to 25 percent ad valorem for such imports exceeding 20 percent of previous year's United States pack of canned tuna of all varieties, is provided in recent Presidential Proclamation. Imports in any year up to 20-percent breakpoint would be subject to 12½ percent ad valorem rate.

Actually, the proclamation provides no active relief for the West Coast tuna industry, since tuna in brine imports over past five years have averaged about 17 or 18 percent of previous year's pack of tuna in all varieties. It will, however, tend to stabilize the industry.

Because the President's Proclamation became effective on April 14, 1956, it provides that the increased rate of duty will apply this year if and when imports of tuna canned in brine after the April 14 date exceed 15 percent of last year's domestic pack of canned tuna.

► Standards for Canned Oysters

Oyster canners of Gulf and Atlantic Coast area met in New Orleans, La. recently to adopt industry standards for canned oysters. Following are definitions adopted by formal resolution of all 28 canners represented at meeting:

(1) Whole Oysters. For purposes of classifying canned oysters for grading, a whole oyster shall be defined as: "Any oyster consisting of a stomach section, a portion of the eye, or adductor muscle, and a major portion of the mantle." Some mutilation and cutting shall not be considered as a bar to classification as a whole oyster.

(2) Tolerance. The term "oysters" shall be used to describe the canned product when it contains oysters, as defined, and not more than 15% broken oysters (pieces of oysters) by weight.

(3) Broken Oysters. The term "broken oysters" shall be used to describe the canned product when it consists of broken oysters or a mixture of broken and tiny oysters.

FISHERY PROGRESS

► New Shrimp Landings Bulletin

A new monthly bulletin on shrimp, which is No. 1 fishery item in United States in terms of value at the boat, is being issued by Fish and Wildlife Service. The new report shows that in January 1956, a total of 5,295,000 pounds of shrimp, weighed "heads off", was landed in the various Gulf ports. Value was placed at \$3,253,000.

Nearly half of the January landings, or 2,616,000 pounds, were pink shrimp landed on Florida's west coast. Brown shrimp, most of them taken off Mexican coast and landed in Texas, totalled 1,364,000 pounds. Louisiana showed highest white shrimp landings, with 481,000 pounds.

► Mexican Navy Seizes Shrimpers

The Mexican Navy has seized six American shrimp trawlers, claiming they were operating within Mexican territorial limits. The American captains insist they were in International waters; that the ships were running at the time of apprehension; that nets were dry; and that they were not fishing in Mexican waters. The fact that some of the shrimp on the boats seized by Mexican authorities were red shrimp is an indication that the shrimp were taken in deep water which would be beyond Mexican limits.

The boats taken in to Tampico were found guilty by local Mexican officials, and the shrimp aboard were confiscated, along with all fishing equipment. In addition, each vessel was fined 15,000 pesos. As of latter part of March, there had been no determination with regard to three vessels taken into Veracruz.

► Big Gain in Meal and Oil Output

During January a total of 167,000 gallons of fishbody oils and 5,205 tons of fish meal and scrap was produced in United States and Alaska by firms reporting their production to Fish and Wildlife Service. This represents an increase of 292 percent in yield of oil and 175 percent in meal and scrap production, compared with same month of 1955.

All species used in manufacture of meal and oil during first month of 1956 were handled in greater volume than during previous January, with menhaden, Pacific sardines, and tuna and mackerel showing greatest gains.

During January of this year, 5.4 million pounds of condensed fish solubles were produced—3.4 million pounds more than that reported for same month of 1955. January production of homogenized condensed fish amounted to 396,000 pounds, compared with 1.2 million pounds during first month of last year.

The Engineer's Report

CASE HISTORY

RPM DeLo Oils

PRODUCT

FIRM

M.V. Nancy Hanks,
San Pedro, Calif.

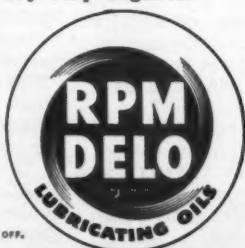
Special oil ends ring trouble and oil burning!



BEFORE USING RPM DELO LUBRICATING OIL, Jim and Matt Martin had trouble with loss of compression, hard starting and excessive oil consumption in the M.V. Nancy Hanks 180 h.p. Atlas diesel. Overhaul in 1950 showed competitive oil caused hard carbon deposits in ring grooves and on other parts. Run exclusively on RPM DELO Lubricating Oil since overhaul, they have had no further trouble. "RPM DELO" keeps rings clean and reduces wear; oil consumption still is normal and compression remains up to factory standards. Engine is in top condition in spite of year-round hard work.

REMARKS: RPM DELO Marine Oil works to develop the highest efficiency in all diesel engines. Oil is well adapted for marine operation; stops bearing corrosion and foaming in wet and dry sump engines.

FOR MORE INFORMATION about RPM DELO Marine Lubricating Oil or other petroleum products, or the name of your nearest distributor, write or call any of the companies listed below.



TRADEMARK "RPM DELO" REG. U. S. PAT. OFF.

"WE HAVEN'T TAKEN UP ONE BEARING in the five years we've used RPM DELO Lubricating Oil," says Chief Engineer Jim Martin (above, left). "And in this time we haven't been bothered with any kind of piston trouble." The Nancy Hanks works off the Southern California coast as a purse seiner; operates 12 months of the year.

How RPM DELO Oils keep engines clean and prevent wear



- A. Contain special additives that provide metal-adhesion qualities...protect parts whether hot or cold, running or idle.
- B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent piston scuffing.
- C. Special compounds stop corrosion of any bearing metal and foaming in crankcase.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 • STANDARD OIL COMPANY OF TEXAS, El Paso
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey • THE CALIFORNIA COMPANY, Denver 1, Colorado

B.F. Goodrich



3200 Spongex floats do the work of 7000 conventional floats on this 9 ton net

3000 Spongex Floats celebrate their 5th birthday

After 5 seasons' experience with over 3000 Spongex® seine floats, Capt. C.H. Clark, fishing supervisor for Nelson Bros. Fisheries, Vancouver, B. C. and captain of their 122 ton flagship "Western Producer", says,

"I'm convinced Spongex floats are a major improvement over what we've had in the past. The floats on my net have been in service for five seasons and they look practically new. With conventional floats, I'd have started on the third set by now. Furthermore, corks absorb water, lose buoyancy—take valuable time to dry out. This doesn't happen with Spongex floats—they absorb virtually no water at all.

"Another real advantage is a 1500 lb. reduction in total weight. This means lighter work for the crew and with the net carried on the stern a difference of about 5 tons in capacity of any bulk fish."



As fishing supervisor, Capt. Clark says, "Ultimately the entire fleet will be equipped with Spongex floats."



Since the oval floats have been in service, B.F. Goodrich has developed a cylindrical shaped float in 12 sizes from 3" x 1 1/2" to 6" x 7 1/2". Generally, these floats are believed to be even better than the original ones.

Whichever float shape you prefer, your fishing operation will benefit. Write for information and prices to the address below.



SPONGE PRODUCTS DIVISION
243 DERBY PLACE, SHELTON, CONNECTICUT



A skipper we knew had a frown
That reached from his chin to his crown,
But the "Cap" was no dope,
He tried tough K-ting Rope,
Now his grin is the talk of the town.

K-ting Rope

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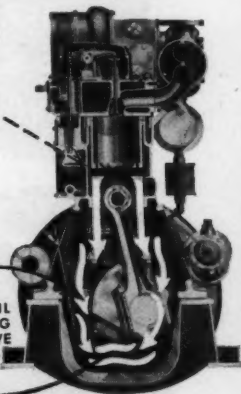
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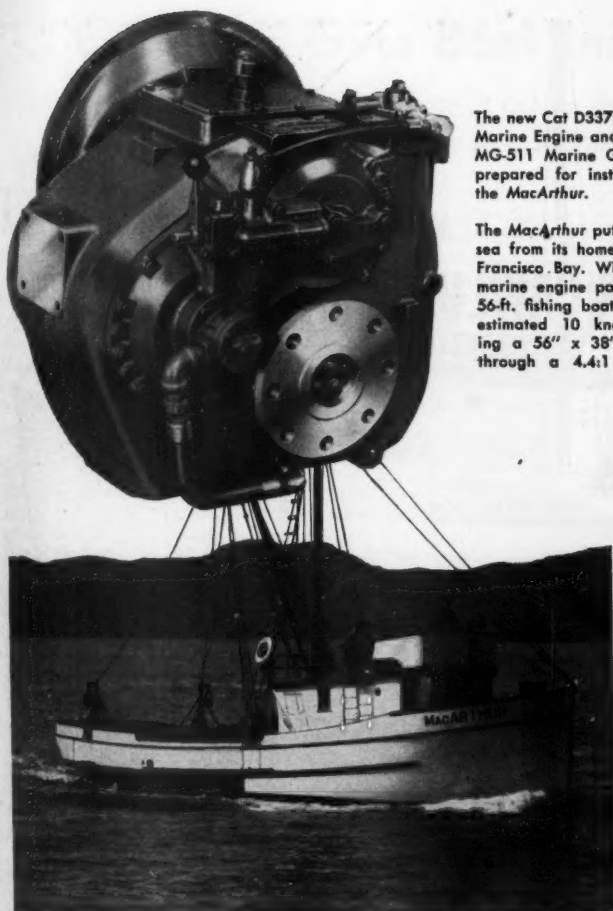
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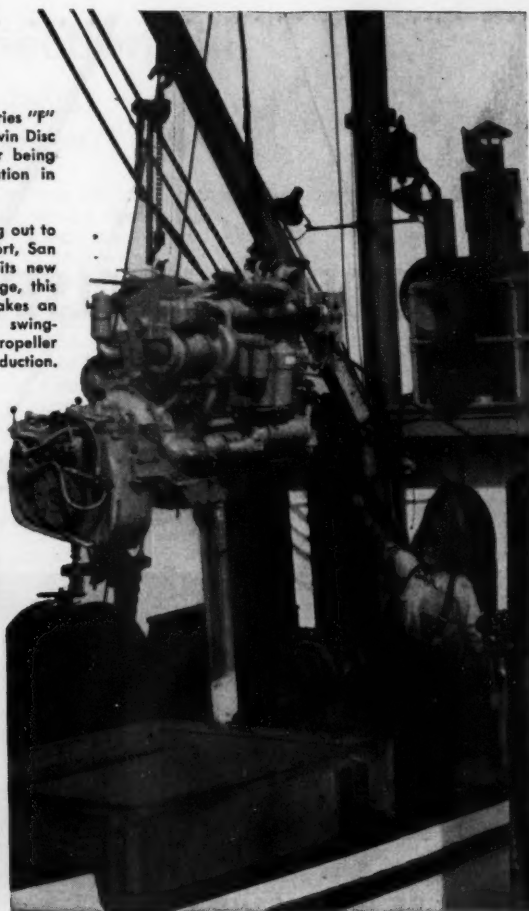
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The new Cat D337 Series "F" Marine Engine and Twin Disc MG-511 Marine Gear being prepared for installation in the *MacArthur*.

The *MacArthur* putting out to sea from its home port, San Francisco Bay. With its new marine engine package, this 56-ft. fishing boat makes an estimated 10 knots, swinging a 56" x 38" propeller through a 4.4:1 reduction.



New Twin Disc MG-511 Marine Gear installed with first CAT Turbocharged Marine Engine!

When the 56-ft. fishing boat *MacArthur* had its old engine replaced, owners Reidar Enge and G. J. Wandtke chose for their new power package the first-built Caterpillar D337 Series "F" (turbocharged) Marine Engine and the new Twin Disc MG-511 Marine Reverse and Reduction Gear.

Selection of the Twin Disc MG-511 Marine Gear was a "natural" in this installation, where compactness and light weight were all-important. For the MG-511 is only 17 $\frac{7}{8}$ " from fly-wheel housing flange to propeller shaft flange and weighs only 950 lbs.!

Besides compactness and light weight, the Twin Disc MG-511 offers

many other advantages and money-saving features.

- Oil-actuated, oil-bath clutches . . . for cooler, longer-lasting, smoother operation.
- Finger-tip control . . . for fast yet smooth clutch and gear engagement and disengagement.
- Full continuous hp in both forward and reverse . . . a perfect feature for twin screw installations.
- Exceptionally heavy-duty anti-friction thrust bearings.

The Twin Disc MG-511 Marine Reverse and Reduction Gear is designed for service up to 240 continuous hp at 2100 rpm and is available in reduction ratios of 4.4:1, 3:1 and

2:1. Chances are, that in your next marine engine installation *you, too*, can utilize the many advantageous features the MG-511 offers.

For further information on the MG-511, write today to Twin Disc Clutch Company, Racine, Wisconsin. Request Bulletin 307.



TWIN DISC CLUTCH COMPANY, Racine, Wisconsin (Hydraulic Division), Rockford, Illinois

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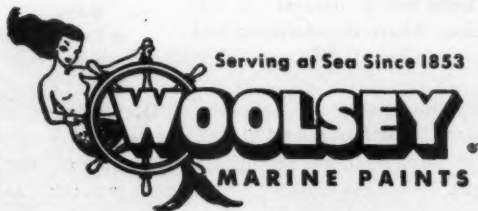
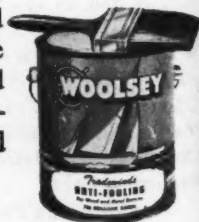
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"CAWLUX" FACTS—"Cawlux" Marine Finish withstands continued exposure to salt, hot sun, scrubbing, hard wear...every punishment a fishing boat must undergo...far better than ordinary paints. This is because "Cawlux" is made with a special alkyd binder that "imprisons" and protects the world's finest pigments in a tough, impermeable, flexible film. Yet "Cawlux" costs but slightly more per gallon! On the hull, trim, decks, cabin, spars, and other topside surfaces, "Cawlux" looks far better far longer than the average marine paint.

"Cawlux" Whites come in Gloss, Semi-Gloss and Semi-Flat. Also available in a wide range of sea-tested colors. *It's false economy to use anything less than the best. Try Woolsey "Cawlux" this season...and you'll agree!*



"TRADEWINDS" FACTS—This highly toxic anti-fouling paint provides *season-long* freedom from barnacles, borers, grass and other attachments! For wood or steel bottoms, "Tradewinds" gives a smooth, tough finish in either Rich Red or Brilliant Green. May be applied over new wood or old paint in good condition, re-coated in 3 hours, launched after 4 hours.



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NATIONAL FISHERMAN - APRIL, 1956

Congress Gets Boat Inspection Bill

Would require annual checking of fishing vessel hulls, safety equipment standards and licensing of operators

INSPECTION of fishing vessels at least once a year would be required under the O'Neill bill which was introduced in the House recently. The legislation has been referred to the Committee on Merchant Marine and Fisheries.

The phrase "fishing vessel," as used in the bill, includes every commercial fishing vessel of over 15 gross tons, propelled in whole or in part by machinery, and which operates outside the line dividing the high seas from the inland waters. The required hull examination of the vessels would be done by inspectors assigned by the United States Coast Guard Officer in Charge of Marine Inspection or his representatives.

Fishing vessels would have to be hauled out on a slip or drydock at least once a year or oftener if found necessary. The inspectors would be required to examine carefully the underwater body, all underwater fittings, and propeller to determine that the same are in good condition. The outboard shaft or shafts on all fishing vessels would have to be drawn for inspection once every three years, or oftener if found necessary.

Under the legislation, no major repairs or alterations shall be made to the hull or machinery of any fishing vessel without the approval of the officer in charge of the United States Coast Guard Marine Inspection Service at the port in which the repairs or alterations are to be made. For all new construction of fishing vessels, the keels of which are to be laid not later than 60 days after the passage of the boat inspection bill, all plans and specifications would have to be approved by the United States Coast Guard Marine Inspection Service or other recognized classification society.

The bill would require that all fishing vessels where the plans and arrangements possibly would permit, enclosures where crews might be quartered or where anyone might be employed would have to be provided with not less than two avenues of escape, so located that if one of such avenues were not available, another might be.

Fishing vessels would have to be fitted with reasonably watertight bulkheads, one to be forward of the engine room and one to be aft of the forecastle, and of such construction as to be strong enough to hold the water in whatever compartment might be flooded in case of a collision or serious leak in such compartment. Also a reasonably watertight flat should be provided to prevent flooding of the engine room in case of a leak in the stern or in the stern tube.

The bill provides that each fishing vessel must have the crew's quarters and mess room fitted with an approved alarm bell to be used in an emergency, and this is to be operated from a switch in the pilothouse and be independent of the ship's power; also one fully-equipped first-aid kit, a radio, or other means of communication between ships and shore. On all fishing vessels of 100 gross tons and over, a speaking tube would have to be installed between the pilothouse and the engine room.

Fire Extinguishers and Lifeboats

Under the legislation, fishing vessels using internal-combustion engines would have to be equipped with carbon dioxide or foam-type fire extinguishers, or any other approved fire extinguishers which have demonstrated their ability to extinguish burning oil; the minimum as for freight and towing vessels under Section 61.13 of the General Rules and Regulations and the maximum to be decided by the officer in charge of the United States Coast Guard Marine Inspection Service in the district wherein the vessel is inspected. Also, fire hose and nozzles as needed would have to be provided.

The legislation specifies that every fishing vessel shall be equipped with at least two bilge pumps, one of which may be used as a fire pump, and of sufficient capacity that

not less than 100 cubic inches of water shall be discharged by each stroke of the piston.

A sufficient number of lifeboats or dories would be required to accommodate at one time all persons on board. Such lifeboats or dories must be at all times ready for immediate use and be equipped with emergency rations to last for at least 72 hours, one lantern showing a white light or flare-up light, one bailer, one hatchet, one boat-hook, and at least one full set of oars.

Every fishing vessel would be required to carry at least two approved ring buoys with not less than 15 fathoms of line attached, and so placed that they are readily accessible at all times; also one approved life preserver for each person on board. A line-carrying gun and projectiles as prescribed by U. S. Coast Guard Marine Inspection Service General Rules and Regulations, would be required.

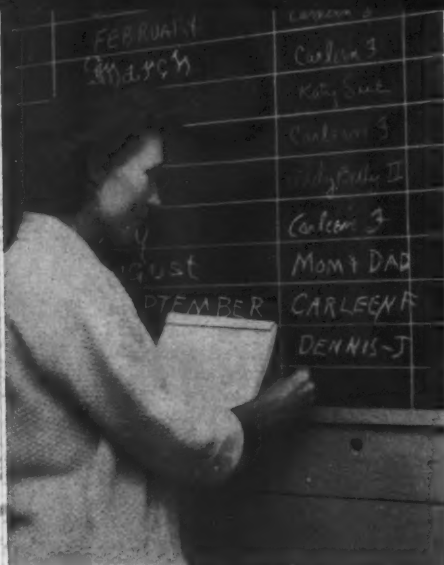
All equipment of fishing vessels such as hose, axes, oars, rafts, life preservers, boats, floats, barrels, and tanks would have to be painted or branded with the name of the vessel upon which they are used. Anchors and ground tackle equivalent to the American Bureau of Shipping Rules and Regulations as to weight and size, would be required.

Another feature of the legislation is a section which specifies that no fishing vessel shall be navigated or operated except in charge of an operator licensed for such service by the United States Coast Guard Marine Inspection. All fishing vessels which operate oceans more than 12 hours out of 24 hours in any one day must be in charge of a licensed master.

Masters, mates, and engineers at present holding licenses for uninspected fishing vessels may have their licenses changed to inspected fishing vessels by applying to the nearest United States Coast Guard Marine Inspection offices not later than 60 days after the passage of the boat inspection bill. Masters who are not licensed at present but who have had one year's experience as master may be licensed by applying to the United States Coast Guard Marine Inspection Service after being given an oral examination as to their knowledge of the rules of the road at sea and chart navigation. Chief engineers also may be given an oral examination and be so licensed.

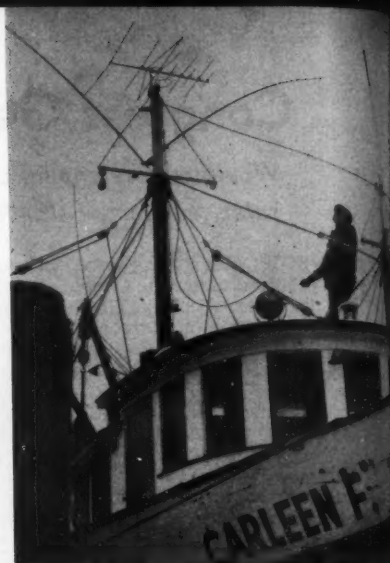


The "Mary & Joan", 99' dragger purchased recently by Capt. Frank J. Strazzere of Boston, Mass. from Herman Saunders of New Bedford. Her equipment includes 350 hp. Cooper-Bessemer engine, Hathaway deck gear, Loran, RCA 20-mile range radar, Fischlupe and telephone; and Westerbeke fishing gear.



Freeport Shows Rapid Growth as Shrimping Center

Mrs. W. W. Gore, left, posts the name of the top shrimp trawler for each month on the Big Boat Board at Western Seafood Co. in Freeport, Texas. Capt. Hollis Forrester's "Carleen F.", right, with new television antenna, was high boat 5 months last year, receiving a \$100 bonus each time.



NOW that the Freeport, Texas, waterfront has settled down after the 18 and 20 hour shifts of the rush shrimping season and taken account of stock, it is certain that 1955 was the biggest year ever in money paid to the boats. And it was the second consecutive year of heavy shrimp production.

Landings at Freeport totalled just under 6 million pounds of shrimp tails in 1955, which was about the same amount as at Port Isabel; the market value of the Freeport catch was about \$3½ million. This makes Freeport one of the top four shrimp ports in Texas, along with Brownsville, where over 10,000,000 lbs. were landed, and the Aransas Pass-Corpus Christi area, with more than 9,000,000 lbs. During 1954, Freeport's production reports were lumped with those of Galveston, and their combined total was 7,311,000 pounds of shrimp tails.

The market price was steady and high during 1955, with the shrimp caught off the Freeport banks running mostly to the largest sizes, 15-20 and 21-25 count to the pound. These two factors combined to produce the record 1955 shrimp income at Freeport.

This year's shrimp season at Freeport will get started in May, it is predicted, with the season reaching heavy production in June-July. At present the boats are limited by the weather. When the wind isn't bad they are making fair catches of white shrimp, but that is mostly Freeport's smaller permanent fleet of about 60 boats.

Shrimping Started as Hand Operation

Freeport has been a commercial shrimp port since 1930, when the men went out in 35' "bald headed" shrimp boats. Bennie Allen, one of the port's veteran captains who now operates the *Emma M.*, recalls that they used to shrimp in waters of 10 or 12 fathoms in depth. They got white shrimp in their hand rigs and received two or three cents a pound for them. Capt. Allen reports that mechanization came about 1932, when the Florida fishermen brought in boats with a cathead and power take-off. This was considered quite a development by the men who'd pulled nets in hand over hand.

Typical of the modern Florida shrimp boats which work out of Freeport is the 67' trawler *Connie Mack*, co-owned by Cornelius McGillicuddy, Jr. of Fort Myers Beach, Fla. and Capt. "Kenny" Vandergriff of Freeport. The boat was built by Diesel Engine Sales of St. Augustine, Fla., and has a General Motors 6-110 Diesel. She is equipped with a Stroudsburg 515T winch and a Twin Disc power take-off. The trawler drags a 100' Western Jib net and uses Rochester wire rope with New Bedford nylon tackle.

The present-day shrimp fleet operating out of Freeport includes several hundred boats from ports all along the Gulf, and even a few vessels from New England. During the heavy production months—June to November—trawlers out of Florida, Louisiana, North Carolina, Georgia, and Mississippi shuttle in and out of the jetties



Looking up river in the Brazos harbor when part of the trawler fleet was tied up in Freeport, Texas, during the shrimp season.

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with Freeport old-timers like Capt. George Norris on his *Chris Marie N.*, Capt. Tincy Bell on the *Cecil Quedneau*, and Forrest Whitley on the *Ronnie Maceo*.

During the last two years the fleet has fished deeper water than ever before. When some of the boats added cable in the last part of the 1954 season, they were able to get good catches of brown shrimp in waters of 40 fathoms. This deep-water Winter production lengthened the season and put boats on a year-round fishing basis, without the necessity of the long trips to the Campeche Banks off Mexico.

One of the new developments this Winter was the installation of a TV set aboard the *Carleen F.* by J. P. Wasson of Plaza Marine Electronics. Reports indicate the reception at the Freeport Banks is good, and Wasson says that it might get to be a regular thing to see the shrimp boats with TV antennas on their masts.

Two New Processing Plants

Waterfront businesses in Freeport which back up the shrimpers and help them to bring in heavy catches, have been expanding along with the fleet. There are now six separate fish houses competing for the boats' catches, which assures the fishermen of high prices.

Two new processors went into operation during the 1955 season. Bill Schoff opened his C. and S. fish house, and expected to be back in bigger operation for the 1956 season. Dyke Seafoods got under way during the end of the 1954 season and had their first complete year in 1955. Harold Dyke, owner, said that the next season should be very good if shrimp continue to be present off Freeport in the same quantity that they have been. He expects the shrimp fleet will show a considerable gross in the Freeport fishery during 1956.

Star Seafoods, which opened in 1954, reports the 1955 season was excellent. Dan DePratter, owner, has put LaVerne Whiteaker in charge this year, and the firm will work on a year-round basis.

During the slack season, a Freeport chute type unloading conveyor was installed at the Star plant by Frank Capell and J. B. Morie, who recently opened a marine fabrication service on the Freeport waterfront. This type of unloader has a metal chute that angles out over the boat, with a basket which drops into the hold to be filled. The full basket is hauled up to the top of the chute, where it automatically dumps itself and goes back down for another load. These unloaders have been installed at most of the Freeport fish houses in order to speed the movement of the boats.

Regular producers for Star during last season included the Quedneau fleet of 70' shrimp boats, all with Caterpillar Diesel engines. This fleet is owned by G. W. Quedneau, Jr. of Punta Gorda, Fla. The Henry B. Lee III boats out of Key West, Fla. were also among the top producers in the Star fleet.

In 1955, a ThermoKing trailer with a White tractor was added to the Star plant's fleet of trucks. The new reefer truck is rated to carry 24,000 pounds of shrimp and hold them to a steady 10° below zero on their way to East Coast and Midwest markets.

Mr. Whiteaker, manager of the Star plant, is hoping for an even bigger season this year. They processed well over 1½ million lbs. of shrimp last season, and will be ready for more in 1956 if the shrimp are there and the weather is reasonable. The 1955 production at the Star plant was over 90% brown shrimp. This is considered a favorable indication for the coming shrimp season in the Freeport area.

Big Boat Bonus System

At Western Seafood Co., where President W. W. Gore has instituted the Big Boat Bonus System, the 1955 season was rated good. Gore commented: "When a shrimp boat skipper comes in and tells me he has 30 boxes aboard and I unload 35 boxes from his boat, I figure there's a man who doesn't like to be disappointed. I don't like being disappointed either, so I'll just say the 1955 season was satisfactory and we hope to do well this year." Western Seafood is opening its second house at the same location,



Shrimp trawlers tied up at the expanded dock facilities of Brazosport Seafoods, Freeport, Texas.

and will be processing two boats at a time during the 1956 season.

Western's Big Boat Bonus System was started by Gore in 1954. During each month of qualifying shrimp production, the trawler with the biggest total catch is awarded a \$100 bonus. Second and third boats also get cash prizes.

For the first 10 months of 1955, Capt. Hollis Forrester's 70' *Carleen F.*, which is powered with a Murphy Diesel, came in with the most shrimp five times. The 63' *Katie Sue*, with Capt. Walter Nini as skipper, was big boat one month. She is powered by a General Motors 6-71 Diesel. Capt. Charles A. Forcke's *Lady Betty II*, a 103-footer pushed by two D13000 Caterpillar Diesels, was big boat another month. The 70' *Mom and Dad*, with Capt. Charles Heurtevant as skipper, and the 70-footer *Dennis J.*, Capt. Warren Stratton, both powered with General Motors 6-110 Diesels, were other big boats.

Mr. Gore says he will continue the Big Boat Bonus during this season. He commented: "The Freeport shrimp operation is based on the fish houses paying high competitive prices to the boats at all times to keep shrimpers coming into the port; the bonus gives the boys a little frosting on their cake, and they seem to like it."

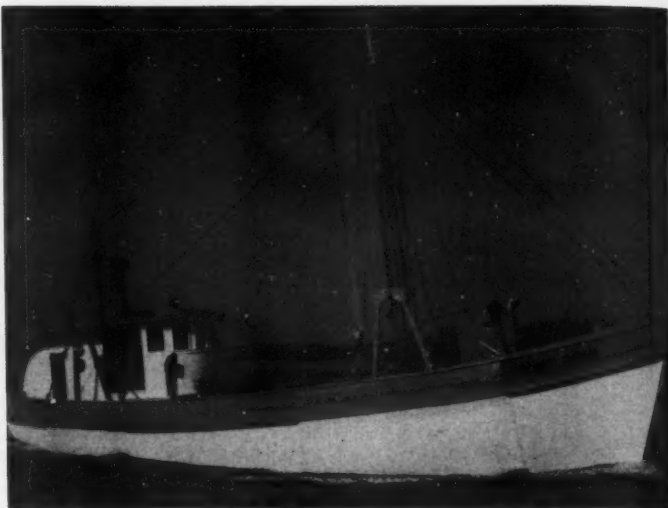
(Continued on page 44)



Capt. "Kenny" Vandergriff, Freeport, Texas, and Cornelius McGillicuddy, Jr., Fort Myers Beach, Fla., aboard their 67' trawler "Connie Mack" which has been shrimping out of Freeport during the last two seasons. She is powered by a 6-110 General Motors Diesel.



Capt. Philip Bodoni of Gloucester, Mass., and his new 55' dragger "Golden Dawn", which was especially constructed for dragging in New England waters by the Morehead City (N.C.) Shipbuilding Corp. She is powered with a General Motors 6-110 Diesel.



"Golden Dawn" is Big Small Dragger

55-footer built in North Carolina joins Gloucester fleet

A NEW Southern-built dragger, the 55' *Golden Dawn*, has joined the Gloucester fleet of medium-sized vessels fishing for groundfish, whiting, and trash fish. She is owned by Capt. Philip Bodoni of Gloucester, Mass., who had the *Bernie and Bessie* from 1948 until 1952, when she was lost. His new dragger *Golden Dawn* is a Hatteras Trawler especially designed for fishing in Northern waters, and was built by the Morehead City (N.C.) Shipbuilding Corp.

Following the new dragger's trial run out into the Atlantic Ocean, Capt. Bodoni made the following comment: "I would say she's a big small boat, and I'm very well satisfied. I don't see how you could get the same power, room, comfort, and capacity in any other 55' boat. I get wonderful performance in speed, and I believe she's going to be a good sea boat."

A close look at the bow and stern of the *Golden Dawn* shows her shrimp boat ancestry, but the rig is Eastern. She has the over-all appearance of being an able dragger, and is unusually roomy for a fishing boat of her size. It is expected that the craft will ice around 60,000 lbs. of fish in her hold, which has a concrete bed on a false floor.

Steel Mast and Rigging

One of the construction novelties of the vessel, as compared with New England-built draggers, is an all-steel mast, with welded steel rungs on the forward side. There are only two wire stays on the boat, all of the others being steel rods.

The rail is high for a dragger, about two feet all around. It is solid right back to the pilothouse, with no scuppers, which should save on clean-up time.

The *Golden Dawn* is planked with two inch fir, while the deck beams are four by eight inch pine. A pair of stringers runs from the fo'c's'le through the fish hold and ends up as part of the engine bed. These stringers are eight by ten inch, through-bolted to all of the beams. Only three or four drift bolts are used in the boat, most of the timbers being through-bolted.

Forward of the fish hold, the fo'c's'le runs right up into the eyes, and there is plenty of headroom. Two bunks line the starboard side, while a third could be put on the port side. The water tanks on either side hold 300 gallons, about double the normal capacity.

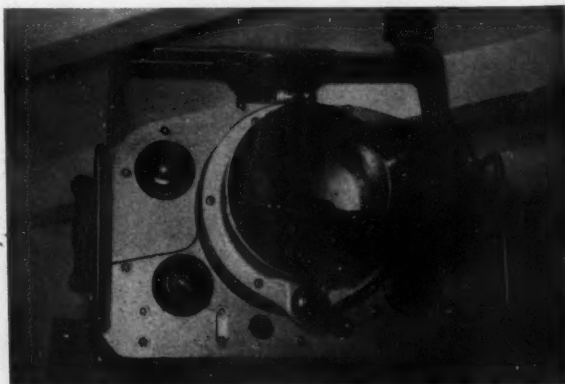
The companionway ladder comes down about two-thirds of the way aft. To one side of it is a built-in table and two benches. A Shipmate Model 212 galley range is centered against the after bulkhead, and there is a stainless steel sink to one side. Built-in lockers run along each side of the fo'c's'le, and lockers also are built in under the counter top.

Wheelhouse Has Plenty of Headroom

The pilothouse is traditional Gloucester, with a turtle back running clear to the stern. The wheelhouse has headroom to spare—six and a half feet. The instrument panel is mounted flush in the coaming ahead of the wheel, and to the left. On the right are Marmac pilothouse controls. Mounted just to one side of the wheel, and at eye-level height, is the vessel's Bat Lavoie marine radar system.

The turtle back is roomy and contains two bunks which are built in against the port side. Opposite, the electronic gear takes up most of the wall space, with a good-sized chart table beneath the cases. A ladder leads down to the engine room.

The electronic and navigating equipment includes a Raytheon "Fathometer" depth sounder, an APN-4 Loran, (Continued on page 38)



Bat Lavoie marine radar system in pilothouse of "Golden Dawn".

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Castagnola Chosen

"Man of the Year"

At Santa Barbara



George V. Castagnola, recently chosen "Man of the Year" at Santa Barbara, Calif. for his civic achievements, fillets a halibut at his fish processing plant. Mr. Castagnola also operates two fishing boats.

BEING chosen the community's "Man of the Year" for 1955 was the honor paid recently to George V. Castagnola, a commercial fisherman of Santa Barbara, Calif. In selecting Castagnola, the Southern California coastal city named a fisherman for the first time.

For Castagnola, the city's highest honor was the culmination of a series of civic attainments. He is the local president of the Native Sons of the Golden West, and of Toastmaster's #5. For six years he has served as chairman of the local Recreation Commission. He is presently on the Board of Directors of the Catholic Welfare Bureau, the Salvation Army, and the Mental Hygiene Clinic. He is a member of the Committee on Fresh Fish of the National Fisheries Institute.

While it may seem a little out of the ordinary for a fisherman to hold all these important posts, actually George V. Castagnola is not an ordinary fisherman. In addition to operating fishing boats, he is a wholesaler, retailer, and processor of fish. His various firms can go out and catch the customer a fish, prepare it at his processing plant, and serve it at his beautiful Lobster House on the Santa Barbara beach. Last year he and a partner even bought the pier where the boats unload fish, the Santa Barbara Wharf, a famous landmark in the area.

Began Fishing at Age of Twelve

"I first began fishing seriously when I was twelve," Castagnola related. "I went out with my father and sometimes we would stay out as long as a week." In those days, the Castagnola family was in modest circumstances, and George as a boy often sold fish from door to door.

"I wanted to be a professional baseball player when I got out of high school," Castagnola revealed. Today, at 48, he is a medium-sized man who looks like he could still go several innings. "I was a semi-pro for a while," he continued, "but they didn't pay much. After I was married, I took a job as an electrician."

In 1933, idled by a strike, Castagnola decided to try his luck fishing rather than merely waiting things out. From deckhand he advanced to skipper, and from skipper to owner. Soon he became a buyer of fish as well as a fleet owner.

"When I left my electrician's job in 1933," Castagnola recalled, "I was making \$27 a week. Four years later I picked up the telephone and bought \$27,000 worth of fish sight unseen." At that time Castagnola was the largest buyer of albacore on the West Coast.

In 1940 there arose a great demand for the liver of the soupfin shark, which was rich in Vitamin A. These shark livers which had sold for 5¢ a pound eventually soared to an astronomical \$22.50 per pound.

During the war, albacore tuna climbed to a peak of \$785 per ton. (The 1955 average price was \$325 per ton.) Besides buying the catch of other fishermen at this time, Castagnola operated 13 boats of his own.

At the present time, he is operating only the *Rex* and the *Santa Lucia*. A third boat was lost during last year's December storms off California. The main species taken by his boats are Pacific lobster, sea bass, and shark.

The Pacific Coast lobster is really a spiny crawfish. It has no claws, but makes up for this by its large size. Castagnola's record lobster was a 24-pounder, roughly the size of a turkey. Many of the firm's lobsters are flown to Western cities, while others are sold retail by Castagnola's Sea Foods, and some end up at his Lobster House.

Castagnola genuinely likes seafood and eats several times a week at his Lobster House. On business trips around the country he frequently makes it a point to dine in noted restaurants to test their seafoods.

He currently is buying fish from independent fishermen all the way from British Columbia to Mexico. One of his firms, a frozen food company, is experimenting with new methods of packing seafood. At Castagnola's retail outlet, it is possible to buy many different kinds of fish, all the way from bass to frozen Japanese swordfish.

Making Jewelry from Abalone Shell

One of the latest Castagnola projects is the La Jolla Del Mar (Jewel of the Sea) jewelry shop on the wharf. Together with designer Marvin Plympton, Castagnola is gearing the plant to large-scale jewelry production. Items such as earrings, cuff links and bracelets are made of the shell of the abalone, an edible shellfish. Abalone shell is variegated and iridescent, and takes a high polish.

Abalones are gathered by divers who pry them from the rocks with tools resembling tire irons. When the body of the abalone is removed from the shell, it is pounded before cooking. An abalone "steak" is prepared by frying it for one minute on each side.

Since abalone shells are a natural by-product of processing, Castagnola is hopeful of a National market for the jewelry. The polished shell itself is so attractive that it sells regularly to tourists at 25¢. In the form of skillfully-made jewelry, it is quite beautiful.

Last year, in spite of his numerous business interests, Castagnola gave three months to the local Community Chest drive. When asked how he is able to keep abreast of all his interests, Castagnola said, "I begin my day early, usually getting up between 4:30 and 5:00 and starting work by 6. Ordinarily I keep going until after 6 in the evening."

Although Castagnola began life in modest circumstances, today he can tell you that he has spent over \$60,000 in improvements on the Santa Barbara Wharf since he acquired it last year in partnership with "Norm" Hagen. The wharf, widely known as Stearns Wharf, has in the past had such illustrious owners as Ronald Colman and James Cagney. On it are situated a restaurant, curio shops and boat landings.

"We may have to put another \$140,000 into the wharf before we get it the way we want it," Castagnola said. This is a powerful statement for a man of modest beginnings, especially since this is only one of his enterprises, and one of the newest. The story of Castagnola's rise to prominence in the fishing industry reads like a Horatio Alger book. It is an American success story, and back of it all is the sea.

58' Alaska Limit Steel Seiner "Valiant Lady"

Incorporates tuna clipper design principles,
including longitudinal framing of her hull

ONE of the most modern boats in the Pacific Northwest fishing fleet is the 58' Alaska limit steel purse seiner *Valiant Lady*, which had a successful first season in 1955 on the False Pass and Port Molar salmon grounds of Alaska and in the Puget Sound area.

The vessel was designed and built from start to finish by Marine Construction and Design Co., Seattle, for Capt. Martin Tomich of Bellingham. Tomich, at 27, is a young but experienced fisherman, having operated numerous vessels since getting his first full share at the age of 15. His father, Capt. Nick Tomich, has been a well-known Northwest fisherman for many years.

Although basically designed as an Alaska limit purse seiner, the *Valiant Lady* fits the present-day pattern wherein fishing vessels must be versatile enough to be used all year around for purse seining, dragging, and even for carrying salmon or crabs in refrigerated sea-water in the hold. B. F. Jensen, vice-president and chief engineer of Marine Construction and Design Co., estimates that the vessel can carry 52.4 long tons of salt water in her hold—plus her tanks filled with 3,000 gallons of fuel—and still have plenty of freeboard for safe navigating.

Into the planning and construction of Capt. Tomich's *Valiant Lady* has gone experience and new concepts of design garnered from the development of the modern steel tuna clippers. Peter G. Schmidt, Jr., president of the shipyard, worked on the development and design of the big tuna clippers *Conte Bianco* and *Seapreme*, helping to develop ideas and methods which were followed in other modern tuna vessels built since, and which have been carried out in the *Valiant Lady*.

The new purse seiner has a 17.4' beam and draft of 9.6' when fully loaded. The *Valiant Lady* is the first steel vessel of her size to utilize the tuna clipper construction principles, one of her main features being longitudinal



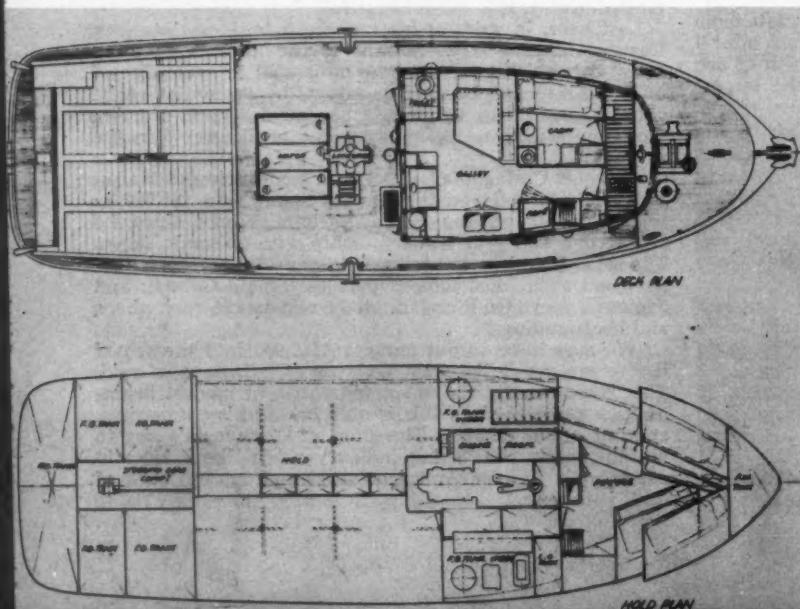
The "Valiant Lady", 58' Alaska limit steel purse seiner built for Capt. Martin Tomich of Bellingham, Wash. by Marine Construction and Design Co., Seattle.

framing of the hull. She retains the best characteristics of wooden boats of her size, combining these with the advantages which only steel can give, such as a tighter hull and freedom from rot. The hull is built of $\frac{1}{4}$ " steel and was finished with a new Andrew Brown Co. Brolite vinyl process after preparatory sandblasting.

The steel hull gives the new purse seiner a greatly increased capacity for fish and for fuel and water supplies. She can carry up to 6,000 gallons of fuel for her Diesel engine, although she usually will carry about 3,000 when fishing. The vessel was designed with the use of the new patented Puretic Power Seine Block in mind, and her seine was hauled last season by means of the Power Block hoisted on a steel boom.

One of the fastest vessels in her class, the *Valiant Lady* is powered with a Cummins NVHM V-12 Diesel, which delivers 270 hp. at 1850 rpm., through a 4:1 Western Gear Works "Sea Master" hydraulic reverse and reduction gear. Her engine turns 52 x 40 Olympic propeller.

Electronic and navigation equipment on the *Valiant Lady* includes a Northern radiotelephone, Loran, Raytheon "Fathometer" depth sounder and Wood Freeman Metal Marine automatic pilot. Mathers remote controls handle the main engine governor, clutch, bilge pump and power take-off. The galley is equipped with Olympic oil range from Washington Stove Works, and an Onan generator provides auxiliary power.



The 270 hp. Cummins NVHM V-12 Diesel in the "Valiant Lady". At left are the deck and hold plans of the vessel, which is reported to be the first steel craft of her size to utilize tuna clipper construction principles.

Experiments Reveal Growing Time of Lobsters

*Charles L. Wheeler and John T. Hughes describe Massachusetts studies in which one-pound lobsters were produced in three growing seasons**

THE feasibility of experimentally rearing lobsters under laboratory conditions from the earliest larval stages to market size has been demonstrated by the Massachusetts Division of Marine Fisheries at its lobster station on Martha's Vineyard Island. Achievement in this instance has been two-fold, for not only were lobsters reared to full maturity from the 1951 hatch but two individuals from this four-year-old group were mated and a new generation, derived from laboratory-reared parents, is now hoped for.

It was shown that a one-pound lobster having a carapace measurement of 3 3/16 inches, the Massachusetts minimum gauge, could be produced in three growing seasons or two-and-a-half years from the date of hatching. However, it should be remembered that these observations apply only to lobsters reared under the conditions prevailing at the lobster station, where the experimental animals were confined and provided with an abundance of food. Animals in the wild state, not excepting those dwelling in the warm waters South of Cape Cod, very probably grow at a slower rate, expending much energy in seeking their prey and escaping from natural enemies.

The information derived from the four-year experiment at the Martha's Vineyard lobster station is, nevertheless, of value since it shows what potential growth rates can be under theoretically optimum conditions, and presents a clear picture of length increases at each successive molt. It is fully realized that the lobster growing period varies with locality, lobsters in cold Northern waters as a rule growing more slowly than those further South. Likewise, there is known to be considerable variation in growth rate among individuals in any given population, to render the situation still more complex. Further work with lobster year classes represented by larger number of individuals is expected to provide valuable information on potential growth rates as applied to Southern New England waters.

In the experiments, lobster mortalities in the higher stages (beyond #6) appeared to be low, but it is impossible to say what they might be were the lobsters exposed to their natural enemies or unsegregated. In this connection, it is interesting to note the cases where two lobsters inadvertently got into the same compartment, an event which invariably resulted in the death of one or the other. No lobster in the study had the great claws restricted in any way.

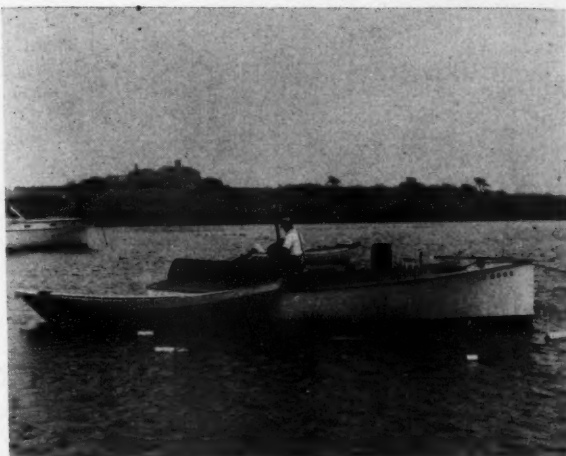
The unusual color of all lobsters reared under experimental conditions is worthy of note, since every one developed a brilliant blue shell quite different from the wild lobster with its usually darker and multicolored shell.

Conditions at Hatchery

The lobster station at which the growth studies were conducted is situated on the northeasterly shore of Lagoon Pond in the Town of Oak Bluffs, Martha's Vineyard Island. The Pond is actually a large and shallow inlet of the sea, typical of the Cape Cod region of Massachusetts, and provides the salt water supply for the station. Heating of water used in hatching and rearing operations is unnecessary due to the relatively high temperatures of the Pond in Spring and Summer.

Average water temperatures by months over the last four years inside the hatchery (readings in degrees Fahrenheit) were as follows: January, 41°; February,

* Mr. Wheeler is Assistant Director of the Massachusetts Division of Marine Fisheries, and Mr. Hughes is Lobster Culturist.



26 ft. lobster boat "Ruby", owned by Capt. George Bloomer, Chatham, Mass. The boat has a 100 hp. gasoline engine with 2:1 Paragon reduction gear and SenDure heat exchanger, which gives her a speed of 20 mph. Capt. Bloomer fishes 300 traps and uses Columbian rope and nylon twine.

38°; March, 40°; April, 51°; May, 60°; June, 67°; July, 74°; August, 73°; September, 72°; October, 63°; November, 54°; and December, 46°.

Completed early in 1950, the lobster station has been in operation on a year-round basis since the Spring of that year. The main building houses the hatching and rearing tanks, a small office and a workshop where maintenance and repair jobs are performed. Two electrically-operated centrifugal pumps draw water directly from Lagoon Pond through an 8-inch suction line and deposit it in a 15,000-gallon storage tank whence it is gravity fed to the various tanks in the main building.

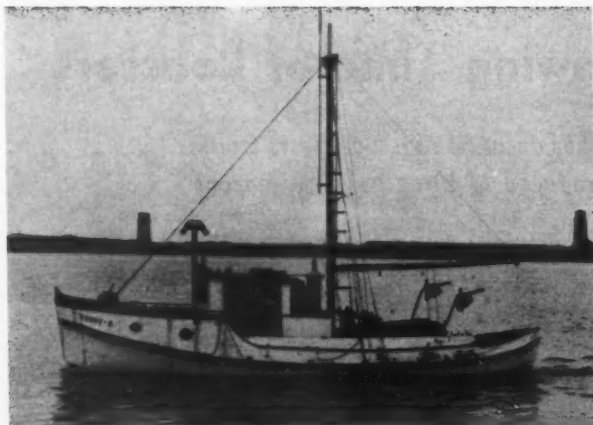
During the first years of operation galvanized wrought iron pipe was used throughout, but a change is now being made to a thermo-plastic pipe which will eliminate many corrosion problems. Water supplied to the hatchery system is taken from a point approximately 400 feet offshore, the intake being at mid-depth in 10 feet of water at low tide.

Objectives of Study

The original objective of the lobster study was to discover whether or not it was possible to keep young lobsters for an appreciable length of time in the station's tanks. Initial success in this endeavor led to the formulation of a series of objectives which are enumerated below:

1. To determine whether lobsters can be raised from the earliest larval stages to the minimum legal length in Massachusetts (3 3/16 inches carapace measure) under laboratory conditions.
2. To determine potential growth rates under hatchery conditions, which include a theoretically optimum food supply. Number of molts also is to be determined during this phase of the work.
3. To obtain some idea of mortality at various stages of development under conditions existing at the lobster station.
4. To determine age and length at sexual maturity under the above conditions.

(Continued on page 52)



37' troller "Wendy R." owned by Capt. Hugo Rusk (right) of Eureka, Calif. She is a double-ender and recently had her pilothouse rebuilt. The vessel is powered by a 125 hp. Mystic Model Lathrop engine.



California Tuna Fishermen Sign Contract with Owners

San Diego tuna fishermen on March 2 signed a new contract with 150 boat owners calling for a new method of controlling expenditures. The fishermen had complained that the practice of not figuring expenses until the end of the voyage cut heavily into their shares.

Under the new agreement, the fishermen will have part control over their expenses, though they will still be paid 48 percent of the net return of catches as before. About 1800 fishermen signed the pact.

At San Pedro, Star-Kist Foods has temporarily curtailed tuna ship sailings, idling about 30 ships. The order was designed to halt landings while the firm worked out a schedule of sailings to avoid a threatened oversupply of fish. Ships already in port with loads or on their way in were not affected by the order.

Van Camp Sea Food Co., which contracts most of the other 30 seiners from San Pedro, said it had no intentions of cutting its sailings, since production was not running ahead of schedule.

California tuna canners are confident that active moving of the Lenten requirements will be followed by continued large shipping into the Summer. It is believed that tuna will be the only important canned fish supply available until quantities of new salmon start reaching distributing centers in August and early September.

Fishermen to Operate out of Washington

Moss Landing fishermen planning to go north for the opening of the Washington season April 15 included Oscar Vienola of the *Ann-Marie*, his brother Arthur on the *Belle J.*, Peter Baade of the *Solveig*, Oren Addleman on the *Dolores J.* and Bill Johnston on the *Elsie*.

Early catches out of Westport, Washington, base of the northern salmon fleet, usually bring highest prices of the year, as the salmon goes to the fresh fish market.

Landings at Canneries Show Gain

The canneries bought 108,600 tons of fish from San Pedro and San Diego fleets during the period November-January, an increase of 33,000 tons over the similar 1954 period. During the three months, 42,316 tons of tuna were received, and 66,261 tons of sardines, anchovies and mackerel. Imports of tuna stayed the same at 7,300 tons.

San Pedro and San Diego fishermen earned \$13,490,000 in the period November-January, according to a report issued by the Cannery Assoc. of Southern California. In addition about \$5 million in wages was paid to cannery workers at the two ports.

Van Camp Buys Puerto Rican Plant

Van Camp Sea Food Co. has announced purchase of the National Packing Co. plant in Puerto Rico. The cannery employs about 200 persons and packs about 30 tons of fish per day. No changes in operations or personnel are planned, according to Gilbert C. Van Camp, president of the San Pedro firm.

Make Good Tuna Catches off Palmyra Island

The research vessels *Gilbert* and *Manning* returned to Honolulu in February after completing month-long experimental fishing and scouting operations in the Line Islands area. In general, tuna appeared to be scarce around Christmas Island, but excellent catches of medium-sized fish were made in the vicinity of Palmyra Island, where the best day's catch consisted of 83 yellowfin.

Fisheries Association Committees

The Southern California Fisheries Association has appointed the following to the Market Fish Conservation Committee to serve with chairman Sammy DeLuca: Carl Merry, Jr., Walter Paladini, Joe Sulentor, and Frank Tsuchiya. One of the duties of this Committee is to correct the erroneous idea that members of the fishing industry are not concerned with conservation.

The newly-named Legislative Committee to study and report on all bills affecting the fishing industry, includes: C. M. Reinke, chairman; Glen Baker, Sammy DeLuca, John Dimassa, and Ray Lemoi.

Dr. Clark Resigns as Laboratory Director

Dr. Frances N. Clark, director of the California State Fisheries Laboratory, ended a 32-year career April 1 when she retired from her post. She will be succeeded by John E. Fitch, senior marine biologist at the laboratory.

Monterey Cannery Production

Six canneries in Monterey and one in Moss Landing received 27,380 tons of fish during the year 1955. Delivery of sardines accounted for 14,480 tons of this total, with the balance consisting of mackerel, anchovies, herring, squid and both local and imported tuna.

In 1955 cannery row packed 770,800 cases of fish, 105,000 gallons of fish solubles for stock feed uses and 222,000 gallons of oil. Value of the pack totalled \$4,478,300, and value of by-products was \$427,350.

Four hundred fishermen were engaged in producing the fish, and there were 78 full-time cannery workers and 1,811 seasonal workers.

The somewhat larger production of canned California sardines in 1955 has moved better, as demand for this type of fish was re-established following two years without supplies.

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Washington to Study Effect Of Logging on Salmon Fishing

The effect which Alaska's new industry, logging for pulp production, will have upon its old industry, salmon fishing, will be the object of a special study to be made by the Fisheries Research Institute of the University of Washington under a contract with the Fish and Wildlife Service. The contract provides for an expenditure of \$35,000 and is for one year's duration.

It also was announced that the Fisheries Research Institute will make a study of the effect of Alaska sea lions and hair seals on the salmon and halibut fisheries. This contract is for \$20,000 and provides for a year's study.

Large-scale logging operations in the huge stands of virgin timber in Alaska are just beginning, and the Fish & Wildlife Service is concerned about any possible damage to salmon streams. Of particular interest will be the extent of silting in the stream bed and any changes in salmon runs and the success of spawning.

The damaging effect which the big sea lions and the hair seal have upon fishing gear in northern waters is well known to the fishing industry, but the general effects on fisheries have not been measured. For some time these animals have been considered serious predators on salmon and halibut, but to what extent is not known. The Fish & Wildlife Service is asking that special attention be given to the locations of the rookeries of these animals, the total populations, the trend in populations and the food habits.

Heavy Smelt Runs

Heavy smelt runs were reported in the Cowlitz and Kalama Rivers of Washington State March 20. The commercial take was estimated at more than 50,000 pounds. Meanwhile in the Queen Charlotte Island area the largest herring catch in British Columbia history was under way.

Japanese Oyster Seed

Nine shipments of Japanese oyster seed were scheduled to arrive in the Pacific Northwest this month, aboard the vessels *Borgholt*, *Oregon*, *Ventura*, *California*, *Charles E. Dant* and others. The seed is that of a hardy Japanese oyster which will gradually replace the Olympia oyster.

Heavy Nushagak River Salmon Run Predicted

The red salmon run into Alaska's Nushagak River, near Bristol Bay, will be nearly double that of last year, according to Dr. W. F. Thompson, director of the University of Washington Fisheries Research Institute.

Dr. Thompson spoke in Seattle at Fisheries Research Conference in the Olympic Hotel, sponsored by the Northwest Branch of the National Cannery Assoc. About 350 salmon cannerymen and others attended.

Dr. Thompson said new methods of forecasting indicate the run will reach 5½ million compared to 3 million last year.

Bottom Fish Landings Decrease

The Fishermen's Marketing Association in Seattle reported February landings of bottom fish were down nearly a million pounds compared to the same month last year. In February, 1956, draggers landed 1,993,840 pounds, compared to 2,908,600 pounds a year ago.

Trawler "Vigorous" Sinks

The Seattle trawler *Vigorous*, Capt. John Peterson, struck a rock and sank in northern British Columbia waters March 21, but the crew of four escaped. The 65-ft. craft, loaded with fish, sank near Alert Bay on Queen Charlotte Sound.

Seek International Pink Salmon Control

Canada plans to seek a treaty with the United States for international control of pink salmon fishing, Fisheries Minister Sinclair said in Vancouver last month. Sinclair



COMBINATION DRAGGER-TROLLER "Anna Louise", owned by Stewart Davis of Chinook, Wash., who fishes California and Mexican waters for salmon and albacore. The 50' boat is powered with a 6-cylinder Buda Diesel, has Goodrich Cutless rubber stern bearing, Fisher radio and direction finder equipment and Photo-Electric steering.

told a convention of the United Fishermen and Allied Workers Union that British Columbia fishermen are being penalized by the lack of a treaty. Washington State fishing interests have been seeking a similar treaty.

Association to Participate in "Fish Parade"

The Northwestern Fisheries Association met recently at Seattle and voted to participate in the 1956 "Fish Parade" promotion campaign. Harris Magnusson, National Fisheries Institute Technology Director, spoke at the meeting on the value of grade standards in a quality control program.

Officers of the Northwestern Fisheries Association are as follows: president, Palmer G. Olson; vice-president, Rufus A. Littlefield; secretary, William B. Eardley, Jr.; treasurer, Robert E. Dignon; and executive secretary, Charles R. Pollock.

March Landings at Seattle

Landings in the Seattle otter trawl fishery during March totalled 1,604,000 pounds from 59 trips, or about 146,000 pounds less than in February. Compared with the same month last year, the March, 1956 catch was 500,000 pounds less, due mainly to a considerable drop in the landings of true cod.

The biggest day of the month was the 20th, when 9 vessels landed 212,000 pounds. True cod led all varieties in the month's landings, with 487,000 pounds; followed by rockfish, with 471,000; and Dover sole, with 134,000 pounds.

The halibut fleet fishery during March yielded a total of 30,200 pounds, consisting mostly of lingcod, and the catch was double the landings of the fleet in February.

Tagged Tuna Recaptured near Japan

A 40-pound albacore tuna tagged 1,300 miles north of Hawaii in 1954 by the Fish and Wildlife Service, was recaptured near Japan, 2,370 miles away, 471 days later. It weighed 15 pounds when tagged.

This is more evidence that the albacore tuna of the North Pacific may belong to a single population which migrates between America and Japan. It is not conclusive, however, because this is only the second instance in which an American-tagged albacore has been taken in Japanese waters.

The tuna migration study is being conducted by the Pacific Oceanic Fishery Investigations unit of the Fish and Wildlife Service. Its purpose is to find out as much as possible about the life history of the fish so as to be able to predict abundance, probable best fishing seasons and locations, and to get other information which will aid the industry to develop new high seas tuna fisheries.



56' dragger "MacArthur" under way in San Francisco Bay. She is co-owned by Reidar Enge and Gus Wandtke, Sausalito, Calif., and recently was repowered with a Caterpillar D337 turbocharged marine Diesel.

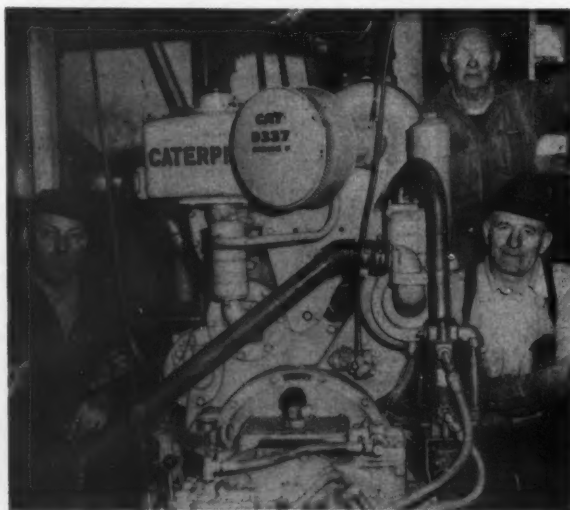
Drag Boat "MacArthur" Gets Turbocharged Diesel

Gus Wandtke, Sausalito, Calif., has purchased the first turbocharged Caterpillar marine Diesel for his drag boat *MacArthur*, which he owns with Reidar Enge and uses in bottom fishing off the West Coast for sole, flounder and rock cod. The new D337 (Series F) engine was sold by Thomas A. Short Co., San Francisco. The Short organization also holds the distinction of selling the first Cat D4400 and D4600 marine engines produced.

Built in Tacoma in 1942, the halibut-type *MacArthur* has 56.3' registered length, 16.3' beam, 8' draft and net tonnage of 34 tons. Equipped with her new Caterpillar power unit, it is estimated that she will do 10 knots.

Wandtke is installing direct electric starting for his new engine, which drives 54 x 40 propeller. The vessel has an 8 hp. Lister Diesel auxiliary, Raytheon "Fathometer" depth sounder, and carries a four-man crew.

The new Caterpillar D337 gets its increase in horse-



New Caterpillar D337 turbocharged marine Diesel in engine room of dragger "MacArthur". Shown around the engine are, left to right, co-owner Reidar Enge, assistant E. Ericksen, and co-owner Gus Wandtke, Sausalito, Calif.

power as a result of a longer stroke and the new turbocharger. The turbocharger is a supercharger driven by exhaust gases whose energy would otherwise be wasted. Furthermore, the turbocharger supplies air according to the engine load. As the engine load goes up, more air is supplied, regardless of whether the engine speed goes up or down.

The new engine has a 5½" bore and 6½" stroke, and is the first Caterpillar Diesel with hydraulic valve lifters. It also is the first Cat marine engine equipped with a Caterpillar-designed marine gear. Caterpillar and Twin Disc engineers worked as a team to design and perfect the gear, which is short and compact to fit small engine rooms. The new D337 engine with its matched gear is 15" shorter than the former model.

High Seas Salmon Fishing off Alaska to Be Regulated

Five important changes in the commercial fishing regulations for the 1956 season in Alaska were announced the middle of March by the Interior Department. The three regulations which pertain to Bristol Bay, Prince William Sound, and the pink salmon restoration program in southeastern Alaska will be effective 30 days after publication in the Federal Register.

The Fish & Wildlife Service issued a "notice of intention" concerning the other two items—"area licensing" and control of fishing on the high seas off the Alaska coast by United States Nationals—thus putting the fishing industry on notice that such regulations would be issued at a later date, to be effective in 1956. Since these two changes represent radical departure from established procedures in regulating the Alaska commercial fisheries, more time is required by the Fish & Wildlife Service for study and review.

Area Licensing

The "area licensing" regulation deals with registration and limitation of fishing boats to one operating area to be selected by the operator. Though previously untested in Alaska, this has been under study for the past five years and has been discussed at public fisheries hearings in Alaska and Seattle, Wash. Authorities on fisheries management concede that area licensing offers the most promise in solving the problem of spreading the fishing effort so that the proper balance between escapement and catch is maintained.

The regulation which would control fishing by United States Nationals on the high seas of the North Pacific Ocean and Bering Sea adjacent to Alaska waters, awaits the consideration and approval of the American section of the North Pacific Fisheries Commission. The Commission has requested such a regulation, the purpose of which would be to prevent development of an American high seas salmon fishery which would intercept the Alaskan salmon runs before they reach waters now under regulation. It has been demonstrated that salmon can be taken in commercial quantities on the high seas to such an extent that protective measures imposed within territorial limits could be nullified.

The proposed limitation on fishing time in Bristol Bay is somewhat different than it has been in the past. This year the Fish & Wildlife Service has included in the regulations a table showing the allowable number of days fishing each week with varying numbers of units of gear in operation. This will permit the operators to make more orderly plans for consolidation, so as to tailor their operations to the number of fishing days per week they desire. The Fish & Wildlife Service will require registration of drift and set nets to be operated in each district 30 days before the fishing season opens, and each week thereafter. This will facilitate setting the initial hours of fishing time.

Prince William Sound, which has been closed to pink salmon fishing for two years, will reopen this year. The

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operators have voluntarily offered to surrender 15 trap sites for 1956 which otherwise would be fished. Since this closure is in the interest of conservation and is similar, although less drastic than the trap curtailment program in southeastern Alaska, it has been incorporated into the regulations for 1956.

The pink salmon restoration program in southeastern Alaska, involving temporary closure of traps accounting for 50 percent of the trap catch of the area, and closure of extensive seine areas in the immediate vicinity of important salmon streams, will be continued in 1956. The Fish & Wildlife Service reports that definite gains have been achieved by the restoration program imposed in 1954 and 1955. The spawning escapements in both years were better than in the parent years, but still not adequate to restore the runs fully.

Oregon Has Large Steelhead Run in Columbia River

A large run of steelhead trout entered the Columbia River during March, according to Oregon Fish Commission biologists who are tagging the fish at Woody Island near Astoria as part of a research investigation. This is a cooperative venture with the Washington Department of Fisheries and the Oregon Game Commission.

In a three-day period during March, Oregon Fish Commission biologists tagged 372 steelhead, which is more than the total tagged for the entire month of March in 1955. During a 14-day period in early March, 803 steelhead were captured for tagging by the Oregon Fish Commission. This is slightly less than the number that both Oregon and Washington together tagged last season. Some 2,500 fish have been tagged this Winter.

One of the purposes of the tagging program is to gain information on migrations. Returns of last year's tags showed the steelhead which were present in the lower Columbia in March chiefly migrated to the following streams: the Willamette River and its tributaries, chiefly the North Santiam and Clackamas; the Sandy and Hood Rivers in Oregon; and the Cowlitz system in Washington, including the Toutle River.

Salmon Season Poor

The February salmon fishing season on the Columbia River was considered a poor one, although there were some good landings the final two days of the period. Prices fluctuated during the season from 40 to 55 cents for Chinook salmon, and steelhead brought 27-36 cents a pound. Both retail prices and prices to fishermen were believed to be at a record high for Winter fishing.

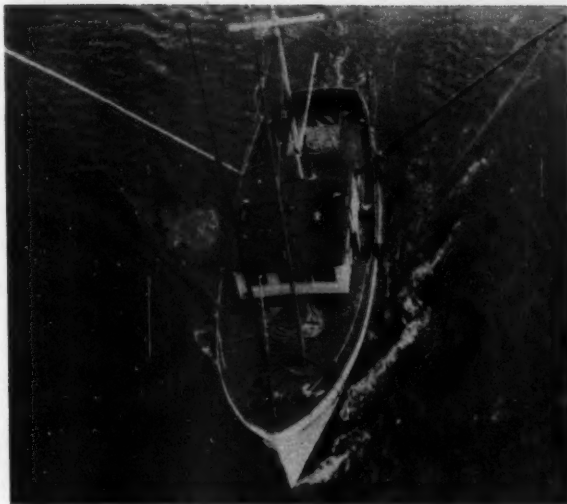
Most gill-netters considered the extraordinary cold weather the reason why the fishing was so poor. Only about 10 percent of the Astoria gill-net fleet participated in the Winter fishery. The next season on the River begins on April 30.

Fish Counted Through Spotting Scope

A different method of counting fish that pass over fish ladders is being experimented with by biologists of the Oregon Fish Commission. It features the use of a 20-power spotting scope 125 yards away on the shore. Mounted on a tripod, the scope will be used by the Willamette falls fishway at Oregon City to tabulate migrating salmon and steelhead.

Biologists hope to gain more information on fish passage, time of migration and number of fish. The scope observations will be used daily when the fish are moving and the water is too high to make a fishway count.

To check the accuracy of the new method, comparable



TROLLER "METTA MARIE" UNDER WAY. The 42' boat was built in 1929, is owned by Jorgen Wright of Florence, Ore., and will be fished this year by his sons, Ronald and Melvin. She is powered by a 140 hp. Chrysler marine engine with Morse coupling, and has Bendix depth sounder.

counts will be conducted, when water levels permit, both at the fishway and through the scope.

Gaper Clam Limit Increased

In a temporary order effective February 28, the Oregon Fish Commission liberalized the personal and commercial use of gaper or horse clams. The regulation applies only to the Coos Bay area near Charleston and the Tillamook Bay area near the Bayocean break-through where harbor dredging operations will soon take place.

In the areas specified, there is no closed season or limit on the number of gaper clams in the allowable bag limit of 36. The former open season on gapers was from July 1 to December 31.

The temporary measure is aimed at utilization of the clams in the two areas that would be destroyed by dredging operations during harbor improvement work by the Army Engineers.

This relaxed bag limit under the temporary regulation will expire December 31, 1956, or upon completion of the work project in each area.

Women Organize to Curb Imports

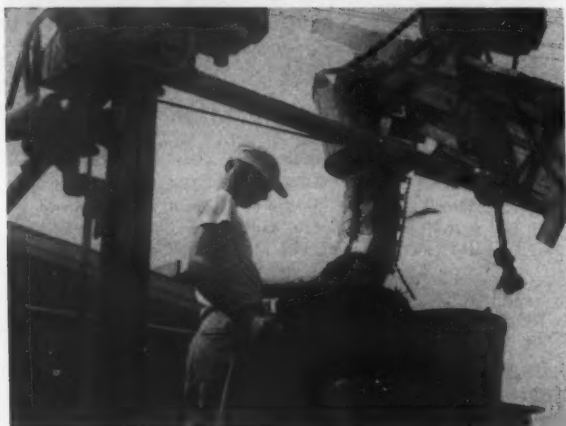
The wives of the fishermen in Astoria recently organized to help the men with the letter writing and publicity necessary to awaken Congress to the need for protection against foreign fish imports. Prompting the wives to organize was a pledge by the Astoria Chamber of Commerce to fight any tariffs or restrictions on imported Japanese fresh or frozen tuna.

Fishermen feel the organization of women for such purposes is significant because the boat operator's work takes him to sea for long periods of time.

Steelhead Trout Live in Fish Ladders

Steelhead trout in the Columbia River at McNary Dam near Umatilla, Oregon, really have the scientists baffled. For the second consecutive year, large numbers of steelheads were found living in the McNary fish ladders when Army Engineers prepared to lower the water for routine repairs. Why the fish do not continue their journey up the ladder and into the Columbia is the puzzler.

Biologists are anxious to try and solve the mystery of the Winter run "won't-climb-the-ladder-steelhead" and the answer would aid considerably in planning future fishways on proposed dams.



Menhaden Used for Frozen Crab Pot Bait

Activities at the fish freezing plant of H. Glenwood Evans and Son in Crisfield, Md., which has an automatic unloader and freezes 25,000 lbs. of menhaden daily for sale as crab pot bait. Above: left, part of a 200-bushel catch being shoveled on the conveyor from the boat "Louise Temple", Capt. Delaney Linton, Saxis, Va.; right, the fish being graded and washed. Below: left, fish being put into bushel baskets to be stored in the freezer.

Maryland Oystermen Have Best Season in Years

Maryland's oystermen have had one of their best years in a long time, according to all reports. Watermen have sold their catches during the past Winter for as much as \$5.00 a bushel, and last month the best dredged oysters were bringing around \$3.75 and tonged oysters were bringing \$3.00 to \$3.25.

The oysters were fat and firm and were running almost a gallon to the bushel. The gallons were selling at from \$6 to \$12, depending on size, in the wholesale market. Increase in population, current prosperity, modern refrigeration and the popularity of the new frozen oyster stews are given as reasons for the peak prices.

Many watermen report a trend away from dredging toward tonging. Maryland law prevents the use of power on dredging boats. Consequently, they are at the mercy of the weather. With too little or too much wind, dredging is extremely difficult.

Fishery Statistical Office Opened

A statistical office for the collection of fishery data has been opened at Annapolis, Md. by the Fish & Wildlife Service, with Lloyd Johnson, formerly of the Fort Myers, Fla. office, in charge. Establishment of the new office will permit earlier release of data on the important fisheries of the Chesapeake Bay States.

Crabbing Season Opens

The 1956 crabbing season officially opened in Maryland waters on April 1, and hard crab-pot operators have been busy getting ready for the season, which lasts until November. Packers and watermen are optimistic over prospects for the coming season.

There have been reports that large numbers of small crabs have been seen in near-by tidewater areas. In fact,

a number of crabs have been caught by oystermen in their tongs and dredges this Winter—crabs that had begun to turn into the peeler stage—something that hasn't been reported to have been seen for many years.

For some weeks, pickers of crabs in many of the seafood houses have been working only two or three days a week. However, this season was the first in three years for the crab meat industry to be in operation throughout the Winter months.

Hard crabs were more plentiful in the lower Chesapeake Bay this Winter than for some time, and as a result the price was around \$3 to \$4 a barrel, going to \$8 a barrel one week recently.

White & Nelson Going out of Oyster Business

White & Nelson, Inc. of Cambridge, one of Maryland's largest packing firms, is going out of the oyster business. Edmund Nelson, company treasurer, stated that the firm's three oyster plants would be closed soon, ending 44 years of operation. The plants, two on Hooper's Island and one in Cambridge, employed about 150 persons.

Prospects are very good that the oyster plants will be sold to someone who will continue in the oyster packing business. During the 1954-55 season, the firm packed about 75,000 gallons of oysters.

Senator Jewell Named to Tidewater Commission

Governor McKeldin last month appointed Senator John R. Jewell to membership on the Tidewater Fisheries Commission of Maryland.

Preparing for Spring Fishing

Lower Chesapeake Bay fishermen are getting their boats, nets and equipment in readiness for herring and other varieties of fish which run up the bay. Boats are being painted, pound stakes are being sharpened and nets are being mended and tarred.

Fishermen are looking forward to one of the most favorable seasons they have had for several years, due to very little freezing in the bay waters this past Winter.

Great Lakes Fishermen Making Good Whitefish, Pike Catches

Yields of whitefish have been good for both Michigan and Wisconsin commercial fishermen. Minnesota producers have been landing excellent catches of yellow pike, as have Lake Erie trap netters whose season opened on March 15.

Most impressive takes of yellow pike, however, were from the Bays de Noc area in northern Green Bay of Lake Michigan. Yellow pike played somewhat of a cyclical role there, returning in unexpected numbers to give fishermen new encouragement on these much-sought-after fish.

From the southern part of Lake Michigan producers were coming up with moderate supplies of chub and yellow perch. But production there was not impressive compared to northern areas where catches of herring, among other species, generally were running fair to good.

From Lake Superior, Minnesota producers were getting nice hauls of lake herring, but lake trout yields in that area were practically nil. In Lake Huron, based primarily on Saginaw Bay operators, catches of the usual species were generally encouraging for the early Spring season.

On Lake Erie, yields of yellow pike, lake perch, sheepshead and white bass were generally good. Spring catches from Lake Ontario also were good in most commercial fishing areas, with best takes in pike, perch, sheepshead and white bass.

New Toledo Fisherman's Cooperative

There are seven member companies in the newly-formed Toledo Fisherman's Cooperative Association, Inc. The Co-op is now setting up its own packing facilities in an effort to reduce the cost of packing, which formerly was done by the individual companies.

Sales manager of the new Co-op is Al Schoewe, who is well known in the freshwater fish trade, particularly at Fulton Market. Steve Szuch of Curtice, Ohio, is vice-president.

Principal variety handled by the Co-op is wall-eye pickerel, also known as yellow pike.

Good Market for Freshwater Fish

Market conditions for freshwater fish are steady for fresh catfish and yellow perch, with evidence of a strengthening market for lake herring which, at Chicago particularly, is in light supply. Demand for lake trout is far above consistent supply.

Lake Erie Take of Pike, Bass Shows Gain

The 1955 Ohio Lake Erie commercial fish production figures show increased yields of both yellow pike and white bass, for which there is usually a good market. In the 1955 catch, yellow pike climbed to the top of the production bracket, with a take of 5,539,900 lbs., or 651,460 lbs. above the 10-year production average.

Blue pike, second on the production scale, totalled 3,679,300 lbs., and white bass, with a total haul of 2,610,370 lbs., was third. Carp and catfish showed increases in production, but yellow perch, sheepshead and cisco takes were below the 10-year average yield.

Total catch of all fish amounted to 20,388,360 lbs. Trap nets were responsible for the greater portion of the total take, producing 15,252,580 lbs.

Urges More Funds for Anti-Lamprey Campaign

Congressman Henry S. Reuss of Wisconsin has urged Secretary of State Dulles to ask Congress for enough money to begin an all-out extermination campaign against sea lampreys in the upper Great Lakes. Reuss revealed that the State Department was prepared to ask for \$615,000 for the year beginning next July 1 for the operations of the Great Lakes Fishery Commission, a newly-created



TRAP NET BOAT "CANOCUS", which is 37' long, has a Chrysler Royal engine, and is owned by Louis Brooks and Harry Day of Cheboygan, Mich.

joint U. S.-Canadian body which will undertake the lamprey extermination program.

The Milwaukee Congressman asked Dulles that the \$615,000 be increased to \$745,000 so that extermination work could get under way in all three of the heavily-infested Great Lakes—Superior, Michigan and Huron. The \$615,000 would enable the Commission to work only in Lakes Superior and Michigan.

Congressman Reuss has introduced a bill to implement the Great Lakes Fisheries Convention signed in 1954 to promote joint U. S.-Canadian efforts to destroy the lamprey. One of the provisions of the Reuss bill is an advisory committee to represent the interests of State fishing agencies, commercial and sports fishermen, and the public at large for each one of the Great Lakes. These bodies would advise the U. S. Section of the new U. S.-Canadian Joint Commission.

Boats Trapped in Ice Floes

During the week of March 19, six boats were trapped in Lake Superior ice floes, but returned safely after several days and nights on the lake. Three of the boats were freed by the Coast Guard cutter *Woodrush* about 15 miles off Bayfield, Wis., and the other three were trapped near Eagle Harbor, but were worked free of the ice after two days.

Commercial ice fishing in the Apostle Island area of Lake Superior this past Winter was somewhat erratic in results, but on the whole the fishermen didn't do too badly, considering the weather. Earl Russell's snowsled went through the ice twice in one day, and Ted Bodin very nearly lost seven gill nets one day, when the ice apron split wide open within 12 feet of where the nets had been set.

Lake Michigan, too, had its risks for commercial fishermen who operate during the Winter. Several boats out of Washington Island off Green Bay were stuck for some hours in an ice field. Fortunately, a change in the wind eventually broke up the ice.

May Open Winnebago to Commercial Fishermen

There is a good possibility that Lake Winnebago, Wisconsin's largest inland body of water, and other lakes and streams in the Fox and Wolf River basins may be opened to commercial fishermen in the not too distant future, at least for rough fish. It is believed that some carefully restricted commercial fishing might help improve the lakes and rivers by providing a way to harvest a crop now largely going to waste.

It is hoped that it will be possible to reduce the sheepshead population, estimated at 23 million pounds in Lake Winnebago alone, to the point where the perch would take over. Other rough fish in the lakes and streams include carp, garfish, eelpout and suckers.



55' shrimp "Miss Marie", owned by Fred F. Sanders of Savannah, Ga., and built by Morehead City (N.C.) Shipbuilding Corp. She is powered with a General Motors 6-71 Diesel with 40 x 32 Columbian propeller, and has Onan generator, Surrette batteries and Stroudsburg winch.

Louisiana Seafoods Get Publicity

More than one million pieces of mail went out of New Orleans during the month of March, carrying a slogan boosting Louisiana seafoods in virtually every corner of the world. This advertising campaign was initiated by the Industrial Service Division of the Louisiana Wild Life and Fisheries Commission, and was approved by 10 leading trade associations. They cooperated with the Commission in using a postage meter stamp which had this reminder: "Dining out tonight? Try Louisiana's Seafood!"

Shrimp Packing Activities Light

During the month of March the production of canned shrimp was practically nil, and the same can be expected for the first half of this month. The Spring packing season opened April 15, and if the catch of shrimp remains light, then prices are expected to be erratic and high.

Stocks of shrimp in canners' hands last month were practically non-existent. Demand was strong and, generally, stocks in distributors' hands were low.

The Robinson Canning Co. of New Orleans, beginning with the Spring pack, will put up shrimp under new brand labels—Nola Brand Broken Shrimp and Salad Brand Cleaned Shrimp.

Twin City Co-op Elects Lewis

The annual meeting of the Twin City Fishermen's Co-operative Assoc. was held March 12, 13 and 14. Officers elected for the coming year were John Lewis, president and general manager; Earl Webster, vice-president; and Alvah T. Galloway, secretary-treasurer.

Members of the Board of Directors for another term are: James Jumonville, Chris Hanson, Clyde Davidson, Willie Aucoin, and M. A. Yonge; D. W. Derry was chosen to fill the unexpired term of Vernon Allen who is on leave of absence; new directors elected are W. J. Boudreaux, Ashley Galloway, P. T. Lemmon, Eunice Varnum, A. K. Knudsen and T. B. Mock.

The directors elected as chairman of the board Ashley Galloway of Morgan City. He succeeds Clyde Davidson.

Kennedy Marine Named Bendix Dealer

Bendix-Marine has announced the appointment of a new dealership in the New Orleans area. Kennedy Marine Supply of Biloxi, who have opened a new marine equipment establishment in Harvey, La., will serve the New Orleans area and Lake Ponchartrain in particular. Wes Courson will be manager.

Florida Oysters Staging Comeback in Crystal River

After several years of very poor oystering in Crystal River, oysters are increasing in number, according to local fishermen. Restaurants at Crystal River and Homosassa Springs are using the 200 gallons brought in each week by a dozen oystermen.

In accordance with a State law, adopted as a conservation measure, shells from each day's haul are taken back to the oyster bars from where they came. The shells form an aggregate on which newly-spawned oysters may grow. Another seeding method employed is putting down stakes.

Ed Tolle, manager of a fish house which handles the bulk of Crystal River oysters, has 80 acres under lease from the State. The oyster restoration process is a slow one, and oystermen believe it will be at least 10 years before oysters become plentiful.

Fishermen Organize at Welaka

An association of commercial fishermen has been formed at Welaka, and its 122 members voted recently to have representatives of the group meet with the Florida Game and Fresh Water Fish Commission.

Organization of the new group was the latest development in recent difficulties between fishermen and game wardens on the St. Johns River.

Opposed to Electrical Fishing Devices

The Florida Game and Fresh Water Fish Commission last month passed up consideration of a proposal by commercial fishermen to permit use of electrical fishing devices experimentally in the Putnam County area.

Forace Holland of Panama City, chairman, told delegations representing commercial and sports fishermen, that the Commission is working on several proposals to solve fishing disputes in the Putnam County area.

Crab Plant Sanitation Standards Outlined

Florida's crab meat producers last month were handed uniform sanitation and operation standards by the State Board of Health. Maintenance of safe bacteriological and laboratory standards in the crab meat industry has been the responsibility of the State Board of Health for many years.

With crab meat production in Florida increasing and Eastern States demanding an approved product, the meeting of health officials and crab meat producers was called to discuss problems of the industry.



70' shrimp "Little Katie", built by Conrad Industries, Morgan City, La.; owned by Isadore Delcambre and skippered by Capt. Otis Miguez of Delcambre. She is equipped with 205 hp. General Motors 6-110 Diesel, Bendix DR-7A depth recorder and Stroudsburg hoist.



Quahaug boats in Allen Harbor, R. I. (Providence Journal-Bulletin Photo)

Rhode Island Bill Would Boost Quahaug License Fees

Rhode Island legislative proposals for broad revisions of the State's shellfish laws, to protect the multi-million-dollar quahaug resource and provide stability for the industry, were outlined at a meeting in Providence last month. The proposals called for are:

1. Boosting license fees from \$2 to \$25 for commercial fishermen, plus a \$1 license fee for each boat; a new \$1 license fee per boat for any resident taking a bushel of quahaugs while working from the craft, and a \$5 license fee for non-residents taking a bushel.
2. Reduction of the daily maximum take for commercial fishermen from 20 bushels to roughly 10 bushels.
3. Management powers under which the State Division of Fish & Game would fix days on which newly opened, heavily stocked quahaug grounds could be fished.
4. A requested appropriation from the State of another \$25,000 for a quahaug transplanting program for this Spring to fill the gap until the license fee program begins.

Also in prospect are the opening of the vast quahaug grounds in Mt. Hope Bay within a year, and the quahaug transplanting program in the Providence River.

Late last month the Fisheries Committee of the Rhode Island House of Representatives recommended passage of a bill opening more area for mechanical dredging of quahaugs.

Lobster Season Opens

The Fish & Game Division reported that 75 lobster licenses had been issued up to the 31st of March, and it is expected the number probably will reach about 150 before the season ends next December. The season actually opened on April 1, and a few hardy fishermen had their gear in order and their traps set.

The price of native lobsters was expected to be high, as Maine imports were bringing \$1.25 a pound retail for "chickens" and \$1.50 a pound wholesale for the larger "selects."

Want Lobster Fishing Year-Round

A bill to permit year-round lobster fishing was introduced early last month in the State Legislature. The lobster bill would repeal the section of State law which now fixes the season between April and December 31.

Landings for Year Show Gain

Landings of commercially-caught fish and shellfish at Rhode Island ports during 1955 amounted to 114.9 million pounds valued at 4.7 million dollars to the fishermen. Compared with the landings during the preceding year, this was an increase of 11 percent in quantity and 13 percent in value.

New Boston Fisheries Co-op Plans Market Expansion

Marketing operations by the new Boston Fisheries Co-operative, Inc., a sales agency located at 17 Fish Pier and sponsored by 21 wholesale fish dealers, began April 2. The Co-operative will market the products of its members on a National basis, under common brands. The program also calls for the development of new and improved products, expansion of all activities, including the modernization and enlargement of the present fishing fleet.

The membership of the new Co-operative is comprised of the following producers: Baker, Boies & Watson Co., Bay Fish Co., Bart Tribuna Co., Blue Sea Fish Co., Boston Fish Co., Cassius Hunt Co., Columbia Seafoods Co., Coral Sea Fisheries, Diamond Fisheries, Eastern Seafood Co., F. E. Harding Co., Hub Seafood Co., John Mantia & Sons Co., L. B. Goodspeed Co., North Atlantic Fish Co., O'Hara Bros. (Star Fish), Shamrock Fisheries, Super Snooty Seafoods, Warren Fitch Co., Wennerberg's Inc., and New England Fillet Co.

Following is a list of officers: James S. Carlson, president; Sidney Cohen, vice-president; Robert Rorke, treasurer; Ralph Ventola, assistant treasurer; James G. Fitzgerald, clerk. Directors are Frank J. Delahoyde, Gregory Sacca, John F. Dolan, Walter Shute and Emil Cefalo.

Quality Inspection Service

Quality standards and controls, inspection procedures, sanitation codes, handling and processing methods, packaging techniques and merchandising formulas have been established by the new Co-operative. Uniform high quality under the Co-op brands will be fully guaranteed by an inspection service headed by Bert Lindgren, formerly with the Fish and Wildlife Service. His staff will have complete and final authority in the enforcement of all quality standards.



Lobstermen Clifford Colson (left) and Roy Scofield, Jr. of Corea, Maine, after a day on the water.

Maine Trawler Fleet Resumes Operations after Layoff

Birds Eye Division of General Foods sent the trawler *Crest* to sea on March 20 to open the season after a layoff which started February 6. Capt. Mike Mahar took out the *Crest* and was followed the next day by the *Surf*, Capt. Frederick Ryan.

Capt. Pete Mills took out the *Wave* on the 23rd and was to be followed on the 26th by the *Calm*, Capt. Ernie O'Toole. The *Squall*, Capt. Ronald Whiffen, Sr. was to sail the 28th, and Capt. Wilson Spinney was to take out the *Drift* the following day.

By the time the last trawler had sailed, the *Crest* was heading for port with the first catch of the season.

Dragger Hits Breakwater

The bay scallop dragger *Jerry Hall*, owned by Hugo Lehtinen of Tenants Harbor, struck the eastern side of Rockland Breakwater last month while returning from a scalloping trip in the bay.

Hugo Lehtinen, Jr. of South Thomaston, master of the boat which is used as a seiner in the Summer, backed her away from the barrier and raced for shore to beach her. Lehtinen was barely able to make the beach a half mile away with the rapidly filling craft.

As the tide dropped away, workmen were able to reach the damaged stem of the 45 ft. vessel and start temporary repairs.

Work on Methods of Delaying Lobster Shedding

J. Kenneth Donahue, Syracuse University biologist who has been working in cooperation with the Dept. of Sea & Shore Fisheries research division has conducted experiments which indicate that shedding of lobsters can be delayed by treating the lobsters with estrogenic hormone. Practical applications of Dr. Donahue's findings will have to await further study, but some marine biologists believe that it eventually may be possible for pound owners to keep their lobsters from shedding by adding estrogenic hormone to the crustaceans' feed.

Marine biologists believe the first step has been taken on the road to a solution of one of the Maine lobster industry's major headaches—the fact that shedders or soft-shell lobsters are prevalent during the Summer months when the demand for the seafood hits its peak. Fishermen have long known that if lobsters could be

persuaded to delay their shedding several months, they would be more marketable and better suited for shipping when the demand is greatest.

Seek Price Increase for Hake

Vinalhaven fishermen late last month began circulation of a petition which asks three cents a pound from the Burnham & Morrill Co. for hake to be packed in the Island factory. Burnham & Morrill had offered the fishermen two and a half cents as a top figure in meetings with the Islanders. They hope that the plant can be put into steady operation during the May run of the fish.

Lobstermen Rescued

Two Portland lobstermen, missing for two days, were picked up on March 25 from their 42 ft. boat the *Happy Joe*, which was battered by heavy seas and leaking badly. It was doubtful if the boat could be salvaged.

The men were rescued by the Coast Guard cutter *Bibb* after being spotted by a search plane out of Quonset Point, R. I.

Fishermen's Association Re-elects Gallant

At a recent meeting of the Maine Fishermen's Association in Rockland, Capt. Henry Gallant, veteran fishing captain and founder and first president of the group, was re-elected president for another year.

Other officers elected included Ronald Whiffen, Jr., Rockland, Vice-president; Oscar Columbe, Thomaston, second vice-president; Gerald Adams, Thomaston, secretary; and William Vinal of Rockland, treasurer.

Lobstermen Want Buoy off Baker's Island

Leslie Dyer, president of the Maine Lobstermen's Assoc., recently said that the Association will ask the Coast Guard to establish a suitable buoy east of Baker's Island off Mt. Desert, to protect lobstermen in that area from loss of traps through warp being cut off by the Bar Harbor-Yarmouth ferry *Bluenose*. Dyer said this action was taken at the request of Otto Backman, delegate of the Association, in behalf of lobstermen in his area.

Ocean Perch Leads in January Landings

Landings of fish and shellfish at Maine ports during January amounted to 5.5 million pounds valued at \$687,000 to the fishermen. This was a decrease of 9 percent in quantity and 4 percent in value compared with January of last year. Ocean perch led all other species in volume landed, but was second in total value to lobsters.

Imports of fresh sea herring into the Maine and New Hampshire customs district during December totaled 22,000 pounds. During 1955, imports of these fish amounted to 5,345,000 pounds.

Landings at Portland during January totaled 2,063,000 pounds valued at \$97,800. Rockland receipts during the same month amounted to 2,544,050 pounds valued at \$126,300.

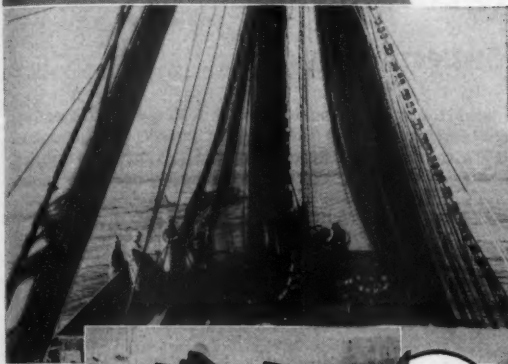
Lobster Boat Burns

The 32 ft. lobster boat *Janice E.*, owned by David Post of Spruce Head, was completely destroyed by fire last month after its owner had cleared the boat from his wharf to save other lobstering equipment. Post has owned the craft for nine years and has another of similar size under construction.

Capt. Metcalf Lost at Sea

Capt. Earl Metcalf of Lubec, skipper of the scallop dragger *Helena Mae*, was lost in the North Atlantic early last month. He and his two crewmen, Edward Newton and Delamere Small, were hauling back when the hoisting gear swung into him and knocked him overboard. He went down quickly, unable to grab the ropes thrown to him by the crewmen.

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Lighter than an ordinary net, Captain Anton Missetich of the *Anthony M* states the new Starr Net handles beautifully and he is looking forward to several seasons of dependable service.

Starr, serving the industry for over 60 years, continues to be the leader in the development of improved types of commercial fish netting.



Another Satisfied HATTERAS TRAWLER Owner!

"We just had to have another one," said Capt. T. O. Hudgins of Pamlico, N. C., now commanding his second 68-ft. Hatteras Trawler, "Miss Muse." First he skippered "Miss Pamlico," owned by his father-in-law, Capt. C. M. Muse. Now they are co-owners of "Miss Muse" while Carlton Muse, Hudgins' brother-in-law, commands "Miss Pamlico."

"I saw these boats built and I handled them from the first day they fished," Capt. Hudgins continued. "They are as good trawlers as I have ever seen."

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Texas Trawlers Locate Good Bay Shrimp Concentrations

Trawling with large nets and doors was allowed in Texas bays and inland salt water March 1, after a closed season to all but 10-ft. bait trawls since December 15. However, most of the boats did not resume operations until the last week in March, when some good bay shrimp concentrations were located from Corpus Christi Bay to Galveston Bay on the upper coast.

Shrimping conditions in the deep south Gulf and the Bay of Campeche have been average, and good catches from that area have been landed at lower Texas coast points.

The principal ports reported a total landing of 1,270,190 pounds of heads-off shrimp in the thirty-day period ending March 25.

Landings of fish and shellfish at principal Gulf ports for the first four months of the fiscal year were 35.7 million pounds, compared with 47.7 million pounds for the same period the preceding year, a decline of 25 percent due principally to lowered shrimp catches.

Edible finfish landings were about the same for each period, approximately 1.1 million pounds.

Oyster production was 107,300 pounds of meats for the current 4-months' period, a 15 percent increase over last year. The outbreak of red oysters reported in the Galveston district about the first of the year did not show up in the Rockport area.

Want Fish Pass Reopened

The Rockport Chamber of Commerce has joined the local sportsmen's Conservation Association in their request to the Texas Game & Fish Commission to re-open the fish pass at Cedar Bayou. This pass, open during high tides, connects the bays north of Rockport with the Gulf of Mexico. It is a Nationally-known location for shellfish and fish.

The commercial fishermen in the area endorse the project and will assist in getting it before the Fish Commission.

Summer Fish Showing Up

The first mackerel concentration of the year showed up off Port Aransas the middle of March, about two weeks early. Other Summer fish are showing up, among these jack fish and tarpon.

To Improve Icing Facilities

Southern Texas Ice Service Co. of Corpus Christi recently took over the ice plants of a former utility company in the south Texas area, and is planning many improvements and extensions for the plants in the

Aransas Pass and Brownsville areas. Ship-side deliveries, ice crushers and snow machines for convenience of trawlers are anticipated.

Brownsville Shrimp Landings

Figures released by the Brownsville Navigation District showed that 61 vessels landed 664,500 pounds of shrimp at the shrimp basin in January, a decrease of 39 percent under the same month last year. Producers contacted in the Aransas Pass area and south to the Rio Grande report production of seafoods was off from 15 to 35 percent during the last three months.

New Shrimp Trawlers

New boats, power equipment and gear are the order of the day during the lull in fishing operations. Diesel Engine Sales Inc. of St. Augustine, Fla. expected to make delivery of a package 67-ft. trawler to Delta Fisheries of Brownsville last month. A D342 Caterpillar marine Diesel rated 150 hp. at 1225 rpm., will furnish power to the propeller through a Twin Disc 3:1 marine reduction gear.

The Sea Garden Distributors have a new trawler, the *Captain Young*. Rigging and accessories recently have been installed at Brownsville. She is powered with a 150 hp. Caterpillar Diesel with Snow-Nabstedt marine reduction gear.

The Southwest Seafoods is now in its new location at Port Isabel. Their fleet of 15 trawlers will be augmented about May 1 by the addition of two new 65-ft. trawlers from the Weaver Shipyards at Orange, Texas. Stewart and Stevenson of Houston are furnishing the General Motors Diesels and auxiliary equipment.

Trawlers Get Special Guard

Sheriff Boynton Fleming of Brownsville has been authorized to appoint three deputies to guard the shrimp fleet and basin at Port Harlingen because of the several burglaries and fires in recent weeks. The Brownsville Shrimp Producers Assoc. will pay the county for the cost of maintaining the special guard.

John H. Schmidt

John H. Schmidt, owner and operator of Schmidt's Marine Ways and Fisheries at Port Isabel, died recently in Galveston. Mr. Schmidt was among the first to foresee the possibilities of south Gulf shrimp production. He built one of the first buildings on the bay front at Port Isabel and installed a freezing plant and mechanical refrigeration equipment for seafoods.

Mississippi Landings For Year Show Large Increase

Landings of fish and shellfish at Mississippi ports during 1955 amounted to 152.2 million pounds, an increase of 45 percent compared with the production reported for 1954. Larger landings of menhaden accounted for most of this gain, although shrimp and hard crabs also were landed in greater quantities.

During 1955 menhaden led all other items, and accounted for 84 percent of the total landings. Shrimp was in second place, followed by oysters and hard crabs.

During December, landings of fish and shellfish at Mississippi ports totaled 823,000 pounds, compared with 1.1 million pounds during the same month of 1954. This 22 percent decrease was primarily due to a 372,000-pound drop in shrimp receipts. Price disputes between shrimp fishermen and packers, coupled with the seasonal holidays caused about two weeks loss of fishing time during the month.

Studying Yellowfin Tuna

The incidence of yellowfin tuna between the north central and southwestern Gulf at this season of the year is being studied by the Fish & Wildlife Service's exploratory vessel *Oregon*, which operates out of Pascagoula. Earlier studies seem to indicate that tuna is in the Gulf in commercial amounts at certain seasons. Commercial boats experimenting with long-line fishing in the northeastern Gulf in March and April, 1955, noted an emphatic decrease in the catch rate.

During the current cruise, slated to end April 19, live tuna and marlin will be tagged and released in co-operation with a study by the Woods Hole Oceanographic Institute on the migratory movement of those species.

Gulf Commission Meets

The annual Spring meeting of the Gulf States Marine Fisheries Commission was held March 15-16 at Edgewater Park. Included in the program was discussion of shrimp biological data dealing with anatomical, histological and survival studies and tagging experiments. Other presentations were heard concerning management of the shrimp fishery, recent red shrimp explorations, and point of sale promotion. A film was shown on shrimp farming.

There were discussions of menhaden biological research, oyster cultivation, oyster reef development, seismic operations, plans for anchovy and sardine explorations and technology, tuna explorations and an economic survey of salt-water game fish.

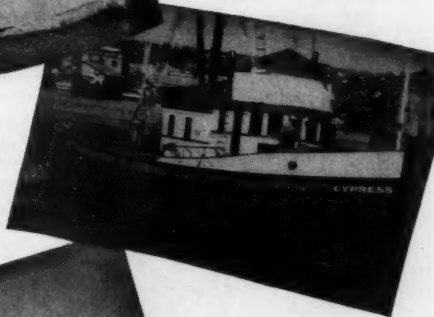
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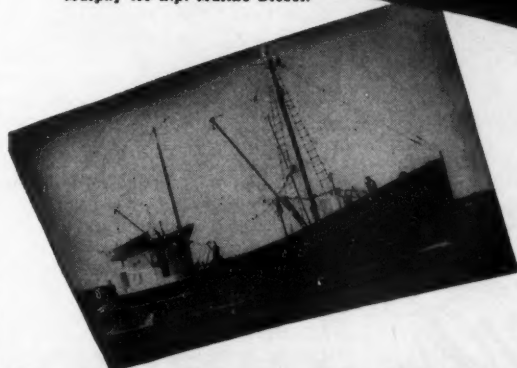


"BLUE BONNET," 73' shrimp boat owned by C. O. Robert, Aransas Pass, Texas. Snow-Nabstedt Model 3758/2057 4.5:1 Reduction Gear on Caterpillar D337 Marine Diesel.

"CYPRESS," 75' cannery tender owned by Fidalgo Island Packing Co., Seattle, Wash., Snow-Nabstedt Model 3764/2065 3:1 Reverse-Reduction Gear on Murphy 190 h.p. Marine Diesel.



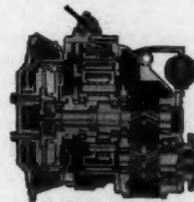
"DEBBIE & JO-ANN," 78' scallop dragger owned by Moses Schonfeld of New York City. Snow-Nabstedt Model 3774/2075 3:1 Reduction Gear on Wolverine-Waukesha WM1905 Diesel.



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Virginia Starts Planting Shells On Public Oyster Grounds

The work of planting about 800,000 bushels of oyster shells on public oyster grounds on the Rappahannock, Piankatank and the Great Wicomico Rivers started about April 1 under the direction of officials of the Virginia Commission of Fisheries.

About one-third of the shells will be taken in Carters Creek, and two large private oyster boats will haul the remainder from shuckers' piles at other locations, to be planted on oyster grounds designated by fisheries officials.

At an average contract price of about 14 cents per bushel for shells planted on spots designated by the State, the cost of carrying on this year's part of the repletion program will be about \$122,000.

"Glut Herring" Appear Early

Fish have been appearing in the herring catch this Spring which have been identified by the Virginia Fisheries Laboratory as glut herring with immature roe. Although these fish are welcomed by the packers later in the season when their roe are fully matured, they are costly to process and are of no value when mixed with the early run of alewives which make up the important herring catch in late Winter.

One way to distinguish the glut herring definitely from the alewife is by the lining of its body cavity. When the fish is cut open and gutted, it can be seen that the lining of the belly in the glut herring is black whereas in the alewife it is white.

Pound Fishing Good

Pound netting for shad and herring was very good in Tangier waters during March. The month started out well, and on the first day Capt. Wyatt Pruitt fishing two nets in the mouth of Cod Harbor, caught 117 bushels of herring and 52 shad.

Around Foxes Island on the west side of Tangier Sound, Capt. Smith Parks also is doing well. He is fishing two traps which he put out in the middle of the month. Besides shad and herring, he is making some good catches of striped bass. In one fishing, he caught six bass, weighing from 15 to 25 pounds each.

Prices of fish in the Tangier market late last month were: roe shad, 30 cents a pound; buck shad, 20 cents a pound; herring, \$1.50 a bushel; and striped bass, 30 cents a pound.

Warned not to Damage Oysters

The House of Delegates last month adopted Russell Carneal's resolution urging the Army Corps of Engineers to use every reasonable precaution to avoid damage to oyster beds in surveying for a deeper channel in

the James River. Carneal told the House that Congress had appropriated money for the survey, to determine the feasibility of a channel to make Richmond and Hopewell deep-water terminals.

Hampton Roads Area Landings

Production of fish in the Hampton Roads area during March amounted to 3,842,000 pounds landed by trawlers in 102 trips, and 519,000 pounds landed by pound netters. Compared with last month, the total landings were about half a million pounds greater. In the same month a year ago, landings were about 242,000 pounds greater than this year.

Pound net landings for this March increased only slightly over a year ago, but compared with last month they were more than double. Shad led in the varieties landed by pound netters, with 268,000 pounds, followed by alewives with 93,000 pounds.

Scup (porgy) led in the varieties brought in by the trawler fleet, with 2,602,000 pounds, followed by croakers with 399,000 pounds.

Connecticut Fleet to Benefit from New Lighted Sound Buoy

Safer passage from outer waters into Stonington Harbor is assured through the announcement from Washington that a lighted sound buoy will be placed at Lords Passage leading into the harbor.

According to a letter from U. S. Coast Guard headquarters in Washington, the buoy is being installed for the benefit of vessels bound to and from Fishers Island Sound from Stonington Harbor. It will be located about 3,100 yards from the Latimer Reef light.

To Join Stonington Fleet

A new dragger, the *Rose-Mary*, will be operating out of Stonington this Summer. The 72-ft. craft skippered by Capt. Bert Simmons of Portland, Me., will be the largest in the Stonington fleet and was expected to start making trips to the fishing grounds this month.

Henry Skippers "New England"

Information published with the illustration of the dragger *New England* in the February issue of *National Fisherman* should have indicated that the boat is owned by Alfred Rebello, skippered by Capt. James Henry and powered with a Caterpillar Diesel.

Georgia Shrimpers Resume Operations In Inside Waters

Fishing for shrimp in inside waters, closed since January 1, opened on March 16, and the many who engage in it are hoping there will be a good run of shrimp, as was the case last Fall.

Many of the Brunswick boats left shortly after the close of the season for Florida, but reports indicate they have not been very successful in their operations and a number of them already have returned. If it is discovered that there is a good run of shrimp in local waters, all of the other boats now in Florida probably will return to the local scene.

It was pointed out by David Gould, Supervisor of Coastal Fisheries, that a survey is made by his department each year to ascertain the size of shrimp before the season opens. In localities where the shrimp do not come up to the requirements, the sounds are closed to fishing. The law provides that it is unlawful to catch shrimp for the market that count more than 55 per pound with heads on.

At the opening of last season, many small shrimp were found, and the waters were closed. Later additional tests were made, and as soon as the count became under 55 per pound, the area was reopened.

New Seafood Plant

William Mullis, the grocer who turned a breaded shrimp recipe into a fortune via the Trade Winds Co., has sold his interests in that firm and announced plans for a new \$300,000 corporation, the Neptunalia Seafood Co., to be located in Savannah. The company will handle a wide variety of seafood, including some prepared through new processes.

Robin Roberts will be president of the new company and Mullis will be chairman of the board. Among the items to be offered will be fried shrimp ready to heat and eat, shrimp cocktails and ready-boiled and deveined shrimp which the housewife can incorporate in her own favorite recipes without tedious preparation. Other kinds of seafood besides shrimp will be handled also.

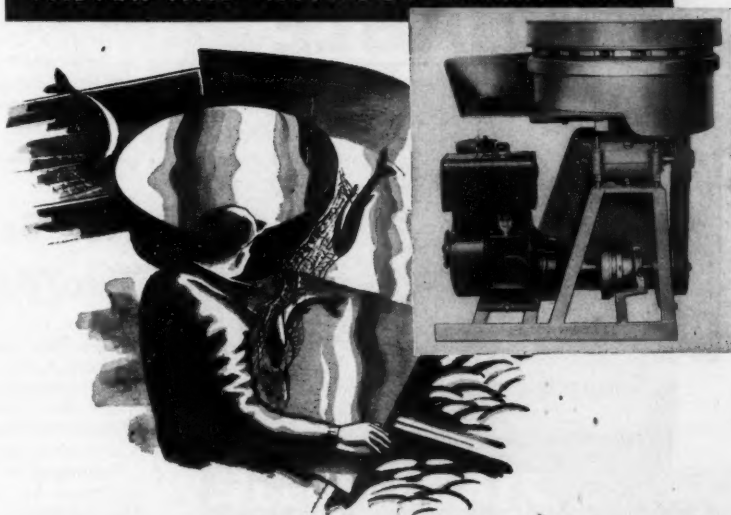
Fish Affected by Plant Waste

Water from the Rayonier, Inc., plant near Jesup has affected taste of fish in the Altamaha River, but apparently is not a human health problem. Fred B. Doherty, general manager of the plant, says everything is being done to determine corrective measures.

Health Department experts are continuing their investigation, but their findings to date indicate the fish are not dangerous or injurious to human health and life when eaten.

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OPERATES AT SPEEDS FROM
70 TO 270 FEET PER MIN.

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Speed up fishing operations with a fast, economical Crossley Net Lifter backed by more than 30 years of successful performance. Used by 95% of all gill netters on the Great Lakes. No user has gone back to hand lifting. Independently powered, can be operated by any member of crew at speeds from 90 to 270 f.p.m. Easily mounted or dismantled on any type of fishing boat. Long life and low upkeep assured. Write for bulletin #5.

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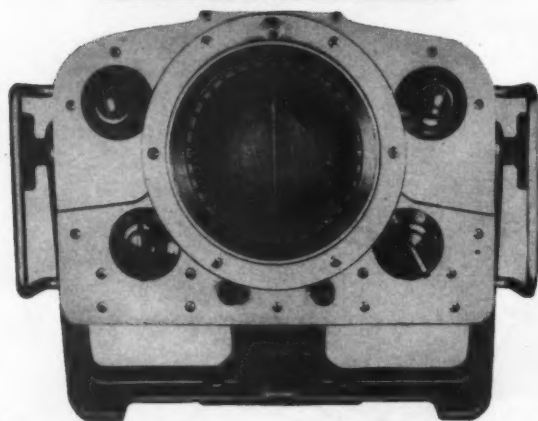
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"Golden Dawn" is Big Small Dragger

(Continued from page 20)

a 60-watt Raytheon telephone, White Constellation compass, One-Mile-Ray searchlight and an electric fog horn on the roof.

There is ample room to work around the 220 hp. General Motors 6-110 Diesel, as well as good storage space to one side by the bank of Surrette batteries, and aft in a separate compartment that houses the quadrant. The engine turns 42 x 38 three-blade right-hand Columbian propeller through 3.75:1 reduction gear. To either side of the engine there are 800-gallon fuel tanks, for a total capacity of 1600 gallons.

The *Golden Dawn* is equipped with a 3000-watt Onan Diesel generating set, with a clutch-driven Jabsco pump connected to the tail shaft.

The vessel has two gallows frames on the starboard side, and on deck is a No. 1353 Hathaway winch, complete with deck blocks. The winch holds 300 fathoms of 9/16" wire on each drum.

The color scheme of the *Golden Dawn* is white and gray, with the interior being white.

New Bedford Fleet Loses Two Vessels in Storms

Two New Bedford boats, the 82-ft. scalloper *William H. Killigrew*, and the 77-ft. dragger *Sea King*, were lost during February. All hands on both vessels were saved.

The *Sea King* sank February 1 about 110 miles south of Montauk Point. Her four-man crew took to dories and was picked up by the Coast Guard cutter *Yeaton*.

Raymond F. Sweeney of Fall River, owner, bought the shrimp-boat type dragger eight months ago. She was built in Essex in 1926 and was overhauled recently.

The *Killigrew* sank February 20, 140 miles southeast of Cape Cod. Her 11-man crew was saved by the Norwegian freighter *Elin Hope*. The fishermen were picked up from dories in fierce winds and heavy seas. The dragger's replacement value was set at \$75,000 by a co-owner, Capt. Knut Haakonsen of New Bedford.

Fluke Landings Increase

During the first two months in 1956, 3,214,900 lbs. of fluke flounder were landed in New Bedford, compared with 1,641,000 lbs. in the same period in 1955. Comparative trips by boats showed 260 in the 1956 period against 248 in the same time last year.

Fish and scallop production in New Bedford during February was nearly 500,000 lbs. more than in February last year. During February this year 3,520,200 lbs. of seafood, including 839,400 lbs. of scallops, were landed. In February 1955 the total was 3,060,200 lbs., including 747,000 lbs. of scallops.

Processing Fish into Animal Food Supplement

Inspection of pilot plant operations of the Sea Products Corp. at New Bedford Institute of Textiles and Technology was made recently by the City Council. Prof. Milton E. Parker, director of food engineering at the Illinois Institute of Technology in Chicago, and president of the local firm, explained the plant operations to the group.

The Corporation is engaged in testing a process of transforming a primary fish product into nutritive animal food supplement. Location of the plant in New Bedford would provide work for about 12 to 15 men in the plant, and for approximately 30 trash fishing boats.



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YOU'LL have more time to tend your nets with a Caterpillar® Marine Engine in your boat. Cat® Diesels are designed and built to take you out and bring you back without trouble. Burning cheap, No. 2 burner fuel, Cat Engines can idle or run at full load for hours without fouling or choking. Every drop of fuel is cleaned by absorbent-type fuel filters. Induction-hardened crankshafts assure long, trouble-free work life. Vital parts are assured proper lubrication with clean oil, regardless of pitch or toss of the boat, by pressure oil pumps. No adjustments or attention are needed, all your hands are available for fishing. We can help you select the right Cat Marine Diesel to power your boat . . . help you custom-tailor the engine to your preferences. Call for a free power analysis — today!

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Marine Division: 4 Water St., Fairhaven, Mass. Phone: New Bedford 6-0011

Main Office: 376 Dorchester Ave., Boston, Mass. Phone: Andrew 8-4660

Live Rocket Landed by Dragger

A live depth charge rocket containing 58 pounds of TNT was landed at New Bedford last month by the dragger *Janet and Jean*, Capt. Elias Olsen. The rocket was picked up in the dragger's nets about 35 miles southwest of Block Island, while fishing at a depth of 32 fathoms.

Scallop "Empress" Drifts Aground

The 109-ft. scalloper *Empress* broke her mooring at the peak of the March 17 blizzard and drifted $4\frac{1}{2}$ miles before the wind, finally coming aground off Wilburs Point, Fairhaven. Capt. Karl R. Hoines, skipper and owner, chartered a tug from the D. N. Kelley & Son boatyard to bring the *Empress* in.

Trap Fishermen Suffer Storm Damage

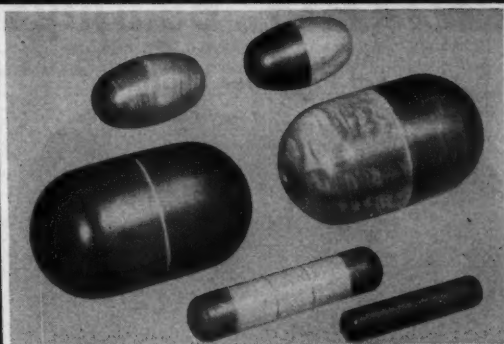
Damage to the Cape's fishing industry during the recent blizzards was rather severe among the trap fishermen. In Barnstable, particularly, the storms came just a week before the trap fishing season was to begin. John Betorino, owner of a fish company, said trap poles, tar barrels, lumber piles and other articles belonging to fishermen in Barnstable Harbor were mixed together and were floating in the harbor.

Woods Hole Scientists Honored

Two American scientists were among twelve men of science of various countries receiving honorary doctorates last month at the University of Oslo, Norway.

Dr. Alfred C. Redfield, senior oceanographer at the Woods Hole Oceanographic Institution, and Dr. Laurence Irving, who recently was appointed an associate in physiology at the Institution, received the honorary degree of Doctor of Philosophy. Dr. Redfield has been connected with the Woods Hole Oceanographic Institution since its foundation in 1931, and became Associate Director in 1940.

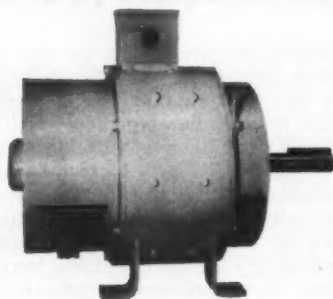
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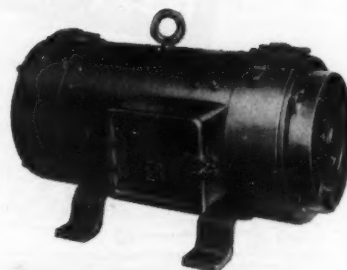
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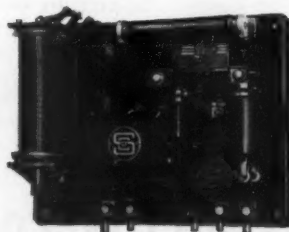


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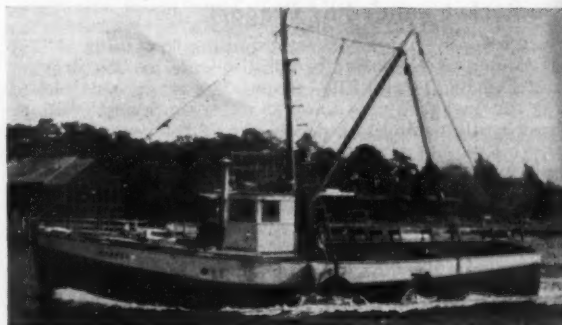


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FIRST COMMERCIAL BOAT TO INSTALL A WHITE AUTOMATIC PILOT

The Gannet, a 38 ft. mackerel fisherman, owned and operated by Jerry Oullette of Hampton Bays, N. Y. "holds a steady course in any sea or wind condition, and a remote control unit permits steering from any position on the boat, including the masthead."

You simply dial your desired course, and the White Automatic Pilot does the rest. For dodging, you have portable remote steering control on a cable. Suitable for boats 20-50 feet in length. 6, 12, 32V D.C. Easy to install. Lowest priced of all automatic pilots.

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EQUIPMENT and SUPPLY NEWS

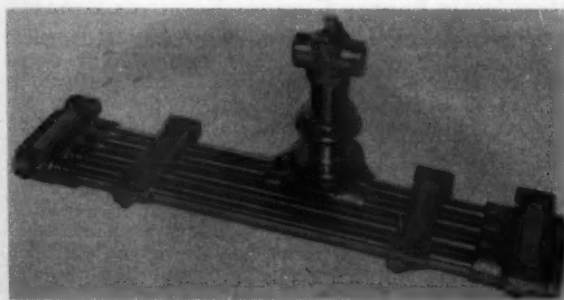
Puretic Power Block Patented

Two United States Patents have been issued to Mario Puretic covering the Puretic Power Block and the method of fishing using the Power Block; patents in Canada and 27 other foreign nations are expected to follow shortly. Named exclusive manufacturer of the Power Block under the patents was Marine Construction and Design Co., 2300 Commodore Way, Seattle, Wash.

The essence of the Puretic Power Block is a powered V-sheave, suspended from the purse seiner's boom, through which the entire seine is hauled aboard. Six models of the Power Block with capacities of 25 meshes of nylon gill net to 3,000 meshes of herring, sardine, or menhaden web are planned for production in 1956.

Since Mr. Puretic's first experiments with the Power Block in purse seine handling aboard the 120' tuna seiner *Anthony M.* in January, 1955, West Coast purse seine fishing has undergone rapid changes. In the first season of use by the United States and Canadian salmon industry, over 2/3 of the Puget Sound fleet converted to the Power Block method of handling a purse seine. Nearly 300 Power Block equipped vessels fished Puget Sound, British Columbia and Alaska.

As the 1956 season approaches, interest in the Puretic Power Block is being shown by fisheries operators on the East Coast of the United States and in foreign countries. In February of this year, experiments in the use of the Puretic Power Block for menhaden seining were undertaken at Fernandina Beach, Fla., and preliminary results show that the Power Block will handle a menhaden seine.



Walter Clean-Flo keel cooler.

Walter Clean-Flo Keel Coolers

The Walter Machine Company's Clean-Flo keel cooling systems are being used on all types of vessels. The keel cooler requires only one opening in the hull and the through hull fitting is composed of two compartments. The cooling water passes through one compartment from the engine to cooling tubes and returns to the engine after being cooled by way of the other.

The complete cooling assembly can be removed very easily for painting and cleaning the hull, draining the engine, or any other reason. The system has slip-joint assembly, and all cooler fittings are equipped with sockets containing neoprene rings; each mounting plate to which the cooler is fastened has a suitable pocket containing an easily-replaceable zinc plate, guarding against electrolysis.

The keel coolers, manufactured by The Walter Machine Co., Inc., who also make V-drives, transfer drives, reduction gears, and propeller pullers, come in sizes for all types of gasoline and Diesel engines. For further information and illustrated literature, write to: The Walter Machine Co., Inc., 84 Cambridge Ave., Jersey City 7, N. J.



J. Bruce Ayer, left, and Richard E. Cutler, who have joined the Sales Department of The H. M. Sawyer & Son Co. as Field Sales Engineers. They will work with the jobbers, carrying on educational and promotional work in connection with protective and safety clothing.

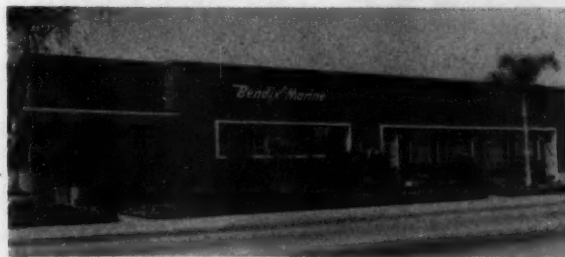
Electric Starting Available on Oliver 15

Optional electric starting is one of the features of the improved Oliver 15 outboard motor for 1956. A Delco-Remy 12-volt heavy duty type battery is furnished as standard equipment with all Oliver electric starting motors. The waterproof aircraft type ignition is sparked by the Bendix-Scintilla magneto. Standard on the Oliver 15 is a new completely-redesigned cantilever type positive acting starter.

Remote controls from any command station and either left or right hand control are available in easy do-it-yourself kits. Controls on the Oliver 15 are centralized and simplified. The push-type choke is fool-proof, and the "Tip-a-lever" carburetor is simple to set. The twist-grip throttle has a new and exclusive speed indicator that is always visible.

Silence in the Oliver 15 is accomplished primarily through precision engineering with the Oliver idea that "silence must be built into the motor." This is illustrated by the use of specially-engineered ball and roller bearings for each job and also rubber shear mounting at six vital points to isolate all low frequency vibration from the boat hull. Intake silencers are designed to eliminate high frequency motor sounds. Objectionable exhaust sounds are completely muffled under water.

The new "Dura-Drive" lower unit is designed with smooth, flowing lines and houses a simplified drive system.



Pacific Division, Bendix Aviation Corp., has moved its marine department into these new quarters on Lankershim Boulevard in North Hollywood, Calif. This new facility will house under one roof, all operations and functions of Bendix-Marine. The Bendix line of marine electronic equipment includes radar, automatic pilots, echo depth sounders, radiotelephones, radio direction finders and portable electric generators.

Northill Air-Lung

Manufacturers of the famous Northill Anchor now offer the fisherman's answer to fouled anchors, fouled nets and damage below the water line

Now you can say "good-by" to cumbersome diving equipment and still make vital underwater repairs hundreds of miles from port. Just check out a good swimmer in your crew on the use of the Northill Air-Lung. It's the best insurance you can have against the possibility of fouled anchors, fouled nets and damage below the waterline.

The Northill Air-Lung is scientifically engineered for maximum freedom, ease of breathing and safety under water. It requires practically no servicing. A swimmer can have it on and be over the side in minutes... can stay below about an hour for every air cylinder he carries... can make necessary repairs working with complete freedom. Every fishing boat should carry one as well as a Northill anchor.

Used and approved by the U. S. Navy



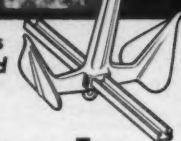
Northill Anchors and Air-Lungs
Sold only through authorized
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9225 South Aviation Boulevard, Los Angeles 45, Calif.

A subsidiary of



Caterpillar Bulletins on Two New Engines

In a bulletin entitled "Two New Engines," Caterpillar describes the 310 hp. turbocharged D337 and the 200 hp. D326, both Series F Diesels. These two engines incorporate a host of Caterpillar's recent engineering and research developments. A great many possible engine arrangements are available, and these are all described in the pamphlet.

Another new Caterpillar bulletin is devoted exclusively to the turbocharged D337. Included is a description and specifications on the new Caterpillar marine gear that is matched to the power of this engine. The gear has such features as oil clutches, hydraulic operation, an exclusive trolling device, and the ability to take the full power of the 310 hp. engine with either propeller rotation.

Copies of the "Two New Engines" pamphlet or the D337 marine engine bulletin are now available from local Caterpillar dealers or from Caterpillar Tractor Co., Peoria, Ill.

Carroll S. Banfield, who has charge of the new Eastern sales offices and warehouse of Applied Electronics, manufacturers of Apelco radio-telephone equipment. Mr. Banfield can be contacted at 104 Mountain Way, Rutherford, N. J. Improved deliveries on all Apelco equipment are expected as a result of the new office, since dealers now will have a complete local inventory from which to draw.



New Sonic Energy Cleaner Removes Grease

Kelite Ke-Sonic, an emulsion cleaner for the removal of oily soil and greases, is manufactured by Kelite Corp., 1250 N. Main St., Los Angeles 12, Calif. Ke-Sonic is claimed to be exceptionally desirable for marine use because removed soil is held in stabilized emulsion even when mixed with sea water.

One form known as Ke-Sonic-C is employed by diluting with kerosene, Diesel fuel or No. 2 fuel oil, and the soiled parts are then sprayed, brushed, wiped or immersed in the solution. Ke-Sonic-C is corrosion safe on all structural metals, and is claimed to be unique among emulsion cleaners in that it will clean metal to provide a no-water break rinse. Both Ke-Sonic and Ke-Sonic-C are fire safe.

New M & G Galvanized Buoy

The M & G Sheet Metal Co., 313 Van Sinderen Ave., Brooklyn 7, N. Y., has introduced a new all-galvanized round steel buoy, which comes in 18" or 21" sizes. Fabricated from 16-gauge steel, it is galvanized both inside and out. The buoy is furnished with a 1½" heavy-duty rubber bumper around the middle, and its two halves are lock-seamed for strength.

Passing through the middle of the buoy is a ¾" pipe, and through that passes a ½" buoy rod with a fast eye at one end and a free-turning swivel at the other end. All the strain is on the buoy rod rather than on the buoy. Load capacity on the buoy is 60 pounds, which is equal to 75' of ¼" chain or 32' of ⅜" chain.



M & G galvanized buoy.

BUOY TO BUOY

SHORE TO SHORE

rely on

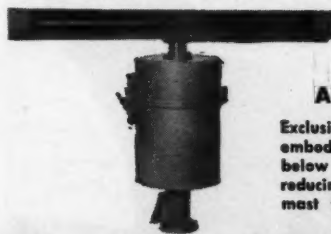
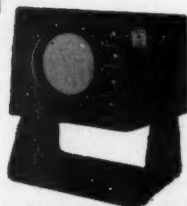


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1, 2, 5, 10
or 20 MILE RANGE

CRT display, 7" diameter, provides clear, precise definition on 5 scales —1, 2, 5, 10 or 20 miles. Can be mounted on bulkhead, pedestal or overhead.



ANTENNA
AND TRANSMITTER

Exclusive antenna reduces windage; embodies transmitter immediately below it to reduce long power-reducing waveguide runs from mast to wheel house.

Edo

CORPORATION

College Point, L.I., N. Y.

SINCE
1925

Columbian Rope Announces Price Reduction

The Columbian Rope Co. of Auburn, New York, has announced a reduction in price of more than 10 per cent on most nylon and dacron rope products, and is offering either filament or spun construction at identical prices.

"A recent reduction by du Pont on the prices of filament nylon and dacron fiber enables us to pass along substantial savings to the users of our synthetics", Charles H. Mosher, vice-president of Columbian Rope Co., stated.

"Columbian also has done an excellent job in reducing its manufacturing costs on both filament and spun construction", he pointed out, "and, at the same time, higher quality rope is being made."

"What Size Anchor?" Answered in Booklet

A new 16-page edition of "Anchors and Anchoring" is available from Danforth Anchors, 2137 Allston Way, Berkeley, Calif. This booklet tells how to figure wind and current loads for a specific boat, how to allow for wave action loads, how to design anchor rode and moorings, and gives other useful information on wind, currents, waves, holding ground, anchors and anchoring.

Booklet on Porus-Krome Engine Cylinders

A new 12-page bulletin on the "Porus-Krome" process of plating cylinder bores and other bearing surfaces is available from Van der Horst Corporation of America, Olean 3, N. Y. The two-color booklet explains that Porus-Krome is pure, hard chromium applied by the Van der Horst process which produces pores to hold lubricating oil.

There are numerous pictures with accompanying description devoted to what Porus-Krome is and how it is applied to the cylinder walls. It is claimed that the Porus-Krome process multiplies cylinder life 3 to 10 times and ring life 2 to 5 times, as well as reducing wear, corrosion and risk of piston seizure.

Maxim Silencer Co. Bought by Emhart

Two veteran Hartford, Conn. companies, both incorporated in 1912, became affiliated recently when Emhart Manufacturing Co. purchased The Maxim Silencer Co. Maxim's corporate identity will be retained, with all present officers and personnel unchanged.

The Maxim Silencer Co., founded by Hiram Percy Maxim and still under the leadership of his son, Hiram Hamilton Maxim, has, since its inception, been known for its development and manufacture of silencers. The invention and early development of the gun silencer, of perhaps more dramatic than commercial value, quickly led to silencers for marine engine exhausts.

Today Maxim manufactures silencers for the exhaust or intake of all kinds of engines, as well as evaporators for converting salt water to fresh water aboard ship. Maxim operates an experimental evaporator laboratory, simulating actual ocean conditions, at Waterford, Conn.

Goodrich Protective Clothing Catalog

A new 12-page illustrated catalog on its line of protective clothing has been issued by The B. F. Goodrich Company, Industrial Products Division, Akron, Ohio.

The catalog features a complete line of lightweight, long wearing, easy-to-clean Koroseal industrial clothing, including Koroseal-coated canvas gloves which are recommended wherever extra toughness is needed for handling abrasive materials. Raincoats, suits (jacket and bib-type overalls), hats, aprons and gloves made of Koroseal are not affected by oils, grease, most acids, alkalis and caustics. It is claimed that Koroseal clothing withstands hard use, resists scuffing and scraping, and that stains and grime wipe off easily with soap and water.

B. F. Goodrich rubber raincoats and work suits are made with vulcanized seams, reinforced at all points of stress and cut full for comfort. The Goodrich line of industrial rubber gloves has been redesigned to provide larger fingers and a full, comfortable fit at the wrist.



NEW BEDFORD ROPE

... first on the Clippers,
first choice on modern vessels.

Fishermen and Fleet Owners know that
New Bedford Rope is:

- Tough and strong.
- Laid right for easy handling.
- Treated for protection against moisture and dry rot.
- Lubricated to reduce internal friction.

New Bedford Rope is stocked in all major
ports.



**NEW BEDFORD
CORDAGE COMPANY**
NEW BEDFORD, MASSACHUSETTS
Serving the Maritime Industry Since 1842

Freeport Shows Rapid Growth

(Continued from page 19)

At Brazosport Seafoods, new docks were set up for 1955 and good use was made of the additional facilities, according to D. D. Dorsey, manager. Mr. Dorsey also had the Big Boat Bonus System in operation during the last season.

In August the big boat at Brazosport Seafoods was Capt. J. Thibreau's *Crescent Limited*, powered with a General Motors 6-110 Diesel. Second boat that month was *Miss Elvina*, also powered by a General Motors 6-110 Diesel, and skippered by Capt. J. Guidry. In September, Capt. "Jimmy" Martin with his boat *Captain Jimmy* was high; and Capt. Louis Chabert's *Captain Buster* was second. The big producer during October was *Lady Luck*, under Capt. Godfrey Chabert, with *Captain Jimmy* coming in second.

Muchowich & Sons, which has 1100 feet of docks and a 40,000-pound capacity freezer, reports that last season was the greatest in their 25 years of business in Freeport. With 18 to 20 regular year-round boats working out of the Muchowich docks and up to 60 boats unloading there during the height of the season, they have kept all facilities busy and expect to expand further.

Three hundred feet of new docks will be ready this Spring, and two more Freeport chute unloaders are to be installed with automatic conveyors to the trucks, Joe Muchowich reports. During the next two years, additional freezer facilities will be put in, and automatic peeling, deveining and packing machinery is planned. Shrimp will be packed in retail-size boxes, ready for the stores.

New Type Shrimp Trawl Introduced

Along with the six fish houses, other Freeport waterfront businesses have expanded and introduced new products for use by the fleet. The Western Jib flat shrimp trawl brought out during 1955 by "Speck" Harris and "Whistle" Rhodes in their Western Net Shop, is now receiving International attention. Jack Nibecker, a manager of Hilos De Mexico, S. A. in Guadalajara has visited Freeport to see the new net in action. The two net shops in Freeport built over 200 of these nets during the season.

At the Western Net Shop, Rhodes and Harris are supplying Rochester wire rope, Linen Thread Co. Gold Medal webbing and New Bedford manila rope. They feel there will be a still wider acceptance of the new Even-Pull trawl body which they have combined with the Western Jibs to make a new and superior flat trawl.

This new style net is also the biggest seller at Freeport Net Shop, where A. S. "Smitty" Nelson has set up assembly line production and waterfront curb service for the boats. At the Freeport Net Shop there is a spin drier with a 250-gallon tar tank for tarring the nets. The tank is equipped with a thermostatically-controlled heater and circulation pump, so temperatures can be maintained exactly to get out a tarred net with the even perfection of factory-tarred webbing. With this new facility, a white net can be perfectly tarred, dried and trucked down ready to go aboard in 15 minutes.

The Freeport Net Shop is supplying Linen Thread Co. Gold Medal netting, Wickwire wire rope, nylon webbing from A. M. Starr Net Co., Shepherd plastic floats, Plymouth rope, Broderick and Bascom trawl cable and manila-covered rope, Taylor chain, and Conservall Copper Chief net preservative. Nelson, owner of the Freeport Net Shop, says the last two seasons have been good, and continued heavy production seems indicated for next season.

Three marine stations in Freeport provide boats with Gulf, Texaco and Humble marine fuels and associated products.

A new service for the boats during last season was provided by Tri-City Ice Co., which has installed a Frick "Shell-Ice" plant. With a Semco ice crusher and blower feeding ice out of the 100-ton storage room, they are able to provide for the tremendous demand when all the boats leave simultaneously after a spell of bad weather. This

WESTERN SEAFOOD CO.

Fishermen !

**Marketing Your Shrimp
is OUR BUSINESS**

When you think of Freeport, Texas, you think of "Western"

"Shell-Ice" plant, believed to be the first in marine service on the Gulf Coast, was installed by R. D. Rice, president of Tri-City Ice, to supplement service from their 80-ton block ice plant. The increased fleet working out of Freeport necessitated the installation.

New Shipyard Goes into Operation

To keep the boats painted and in good shape, a third marine ways was put into operation during the 1955 season at Freeport. The new Industrial Fabricators, Inc. joined Corbitt's double marine railway and Freeport Marine Ways, Inc., of which Hunter Flores is general manager.

Industrial Fabricators offer a new "Metallizing" process for steel boats. Three Freeport vessels received the zinc coating during the past season, and are being observed closely to see how they resist rust while in service. It is expected that the zinc coating will prove to be successful in protecting the hulls and minimizing upkeep.

Still another new service center for the shrimp fleet is the C-D Supply Co., opened by Corbitt Marine Ways. This new supplier offers Woolsey and Navicote paints, Waterbury manila rope, Roebling cable, Goulds pumps, and Oil City Brass products. At Corbitt's they will handle Raytheon electronic products and provide electronic repair service for the boats this year, according to R. A. Durham, Corbitt's manager.

Regarding the last season, Durham said: "It was reasonably good. With the big highly-specialized shrimp boats operating now, there is necessarily considerable upkeep to be performed. The whole trend seems to be toward greater stability and predictability within the industry. I believe things will continue well during the next year."



Joe Muchowich, head of the shrimp branch of Muchowich & Sons fish house in Freeport, Texas, with 15' scale model shrimp boat "Roger Jo Ann". The model was made for Roger Hoss, manager at the Muchowich plant, by Capt. John Plereudis of Fort Myers, Fla.

When in Freeport, Texas

FOR REPAIRS

The CORBITT MARINE WAYS, Inc.

Phones 3-2211 Nite 3-1283

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C - D SUPPLY COMPANY

Phones 3-4650 Nite 3-1283

"ON THE OLD BRAZOS RIVER"

Originators of

**"WESTERN JIB" and
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WESTERN NET SHOP

"Speck" Harris

"Whistle" Rhodes

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Steer Your Course to Greater Profits



NEW LORAN

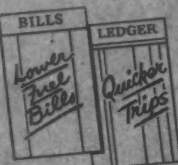


Saves You Time



Whether you are spotting time-tested fishing banks or determining the fastest course for your ship, Radiomarine Loran (Model LR-8803) cuts your running time to the barest minimum. Fast, accurate fixes speed your ship by determining your location . . . maintaining your course. And it operates in all weather . . . foul or fair.

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With Radiomarine Loran you can take advantage of favorable ocean currents that conserve your fuel. Quick positioning in any weather means cutting trip time . . . eliminating costly delays. And for fishing men, Radiomarine Loran helps you find the most profitable fishing banks quicker, indicates when you arrive, and helps keep you directly on your fishing position at all times.

Saves You Effort



Direct reading . . . calculates automatically. Simplifies pin-pointing your position on Loran charts. Recessed scope and dial make day or night reading quick and easy. Whether you are on a fishing boat, tanker, cargo ship or luxury liner, steer your course to greater profits with Radiomarine Loran.



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Boston Research Boat Locates More Deep-Water Lobsters

Another deep-sea lobster colony has been discovered by the research vessel *Delaware* off the Nantucket Lightship. Three thousand pounds of the mammoth shellfish were netted in only three sweeps in a location 14 miles from where another lobster haven was discovered five weeks previous.

The lobsters, some weighing 24 pounds, were brought up about 90 miles east of Nantucket Lightship. The abundant lobster grounds discovered five weeks ago were about 104 miles southeast of the lightship.

Maximum Lobster Size Bill to be Reconsidered

Big lobsters won the first round of a debate on the legal length question when the State Senate turned down a bill which would have set a maximum size for the crustaceans. However Senator Holmes, who introduced the bill, moved reconsideration, and the measure was expected to come up again the latter part of March.

The Holmes bill would set a maximum size of 5 inches. Senator Holmes believes the larger lobsters are the big breeders and that protection of them would increase the supply of lobsters in State waters.

Francis W. Sargent, Director of Marine Fisheries, does not agree with this theory. He stated that lobsters spawn after shedding their shells, and that lobsters drop their shells less often after they attain large size.

Senator Edward C. Stone of Barnstable said four out of five of the lobsters caught off Cape Cod are of the larger size—bigger than the limit proposed by Senator Holmes. Stone said such legislation would put lobster fishermen out of business in the Orleans area, and that the New Bedford lobster industry would be seriously affected.

He further stated that it is only off Cape Cod that the larger lobsters are found, and that along the North and South Shores the measurement problem is concerned only with the minimum size.

Release Tagged Deep-Sea Lobsters

About 300 tagged deep-sea lobsters were released on March 15 along the Southern New England coast for migration study purposes. The lobsters were taken last month by the Fish & Wildlife Service trawler *Delaware* from waters a half-mile deep and 100 miles offshore.

One batch of 100 were liberated off Scituate Harbor and Plymouth Harbor. Another 100 were released along the edge of the Continental Shelf, southeast of Nantucket Lightship, where they were caught. A third lot was released by Rhode Island fishery biologists in Narragansett Bay.

The study, it is hoped, ultimately will show whether the offshore lobsters return to deep waters or remain in coastal waters. The research also will give shellfish scientists other information about lobster habits, to help them compile statistics that will aid the lobster industry.

Fishermen who catch any of the tagged specimens are urged to return them to the Marine Fisheries Division with pertinent data.

Shellfish Officers Association Meets

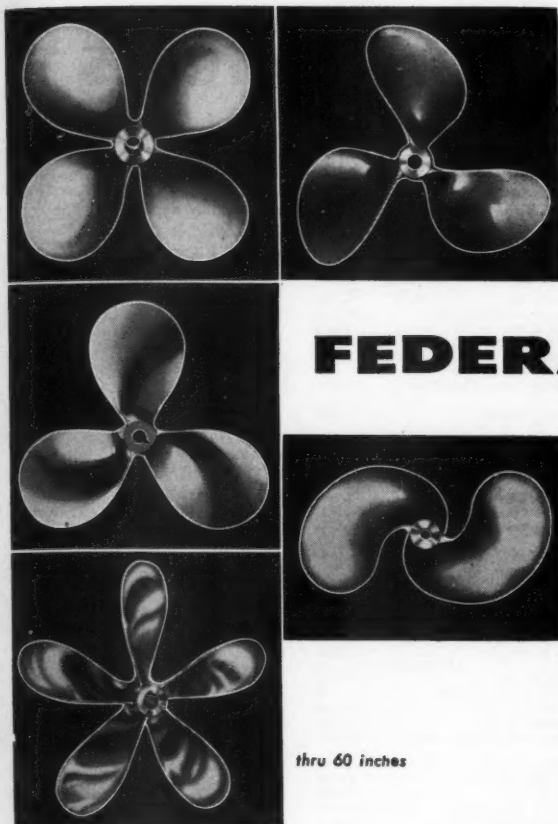
The annual meeting of the Massachusetts Shellfish Officers Association was held in Boston on March 15 and 16. Among the speakers were Walter R. Welch of the Fish & Wildlife Service, Boothbay, Me., who showed pictures on predator controls; Dr. Paul S. Galtsoff of Woods Hole, who spoke on the subject of oysters; Harry Turner, who spoke on quahogs; Robert Dow of the Sea & Shore Fisheries Department of Maine, whose topic was clams; Charles Wheeler, Francis Sargent, A. Russell Ceurvels and Howard Willard.

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OF DESIGNS, DIAMETERS AND
PITCH TO PROVIDE THE MOST
EFFECTIVE PROPELLER FOR EACH
SPECIFIC COMBINATION OF ENGINE,

FEDERAL PROPELLERS

HULL AND LOAD. WE WILL BE
HAPPY TO RECOMMEND THE WHEEL
THAT IDEALLY MATCHES THE
REQUIREMENTS OF YOUR CRAFT.
Write for FREE ANALYSIS form. IT
HAS PAID BIG DIVIDENDS FOR
THOUSANDS OF OWNERS. Do It Now!

FEDERAL PROPELLERS
GRAND RAPIDS 3, MICHIGAN



thru 60 inches

New York Assembly Kills Striped Bass Bill

The Assembly Conservation Committee early last month killed a bill barring commercial fishermen from seining for striped bass. This bill had stirred up an old dispute between hook-and-line anglers and beach-seiners who want to continue netting the fish in wholesale quantities for the market.

The committee which reported unfavorably on the bill called for a study of ways to provide proper fishing opportunities for both groups. Recent studies by the Atlantic States Marine Fisheries Commission did not disclose any need for limiting the catch, as they could find no sign that fishing operations by commercial fishermen were endangering the striped bass population.

Landings for Year Show Gain in Value

An 18% increase in value was shown by 1955 New York State landings, compared to 1954. While total quantity was off 3%, several varieties had good gains: cod was up by 1 million lbs., and whiting by 1.7 million, both nearly double the previous year; sea scallops increased 2.6 million lbs., or nearly 2½ times the 1954 production.

Anglers Protest Skimmer Dredges in Bay

Members of the East Islip Anglers and Boating Assoc. complained again to the Islip Town Board last month about its laxity in enforcing a law prohibiting skimmer dredges to operate in the bay. Anglers recently reported sighting seven power dredges in the bay taking clams.

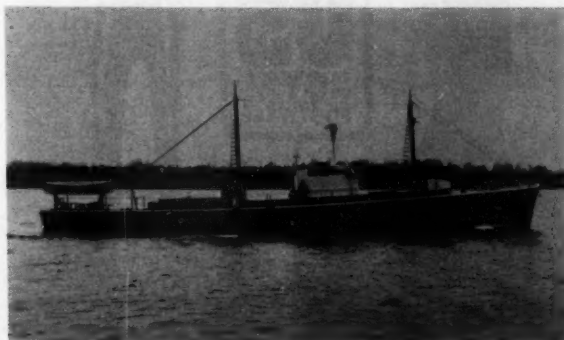
In an attempt to control the dredges, the anglers have asked the Police Department to moor its police boat either

in Champlin or Orowoc Creek, more centrally located than either Bay Shore or Sayville.

Fishermen Warned of Target Practice

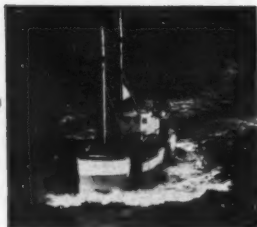
A warning to fishermen regarding a target practice area has been issued by the First Army. The ocean off Montauk Point will be the scene of practice firing sessions for anti-aircraft artillery units during April, daily from 9 A.M. to 4 P.M., except Sundays.

The section affected is a fan-shaped area extending 23,000 yards from Montauk Point Light in a southeast, south and southwesterly direction.



NOVA SCOTIA LOBSTERS ARE CARRIED TO MONTAUK, N. Y. by 110' x 19' x 6' smack "Perry B.", which has capacity of 40,000 lbs. She is owned by Perry B. Duryea & Son, Montauk, and is skippered by Capt. George W. Torrey of Deer Isle, Me. Her equipment includes two Caterpillar D13000 Diesels which swing 42 x 32 Columbian propellers through 2:1 Snow-Nabstedt reduction gears; Willard batteries, Danforth anchor, Kaar radiotelephone, RCA radar and direction finder. The vessel is finished with International paint, and uses Socony fuel and lubricating oil.

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U. S. Peerless Neoprene Suit
• Neoprene coated outside, inside
• sheds acids, oils • smooth corduroy-tip collar • full-length jacket
• bib-front overalls, adjustable
• cut-off band, shortens without raveling • in black, yellow, olive drab



U. S. Ruff-N-Tuff Eureka Suit
• strong, heavy-coated fabric • vulcanized waterproof seams • inside fly front • corduroy-tip collar
• bib-front overalls • elastic suspenders • cut-off band, shortens without raveling • in black, yellow



Storm King Boots • tempered rubber • reinforced toe • deep-cleated outsole



Black Body Boots • "Shockproof" insole • cleated outsole • webbing shoulder straps

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U. S. ROYAL RUBBER FOOTWEAR**

Sold only through industrial and retail stores



United States Rubber

BOAT CATCHES

For Month of March

Hailing fares. Figure after name indicates number of trips.

GLOUCESTER, MASS.

Alden (8)	88,000	Luckimee (1)	151,500
American Eagle (5)	70,500	Madonna Di Siracusa (1)	1,000
Ann & Marie (2)	1,000	Margaret Marie (2)	14,000
Anna Guarino (10)	12,500	Margie L. (5)	4,000
Annie (6)	7,000	Maria Immaculata (5)	17,500
Annie & Josie (5)	13,000	Mary (6)	7,500
Anthony & Josephine (7)	34,500	Mary Ann (3)	35,000
Bonaventure (1)	35,000	Mary E. (3)	3,500
Cape Cod (6)	18,500	Michael G. (1)	2,000
Carlansul (5)	14,000	Minkette I (2)	1,000
Carlo & Vince (7)	43,500	Morning Star (3)	24,500
Catherine B. (3)	107,500	Mother Ann (1)	225,000
Cigar Joe (6)	75,000	Nancy & Maria (5)	9,000
Curlew (1)	177,000	Natale III (6)	89,500
Cushmere (1)	240,000	Njorth (1)	1,000
Dawn (6)	6,000	No More (4)	4,000
Dolphin (5)	187,000	Ocean Life (1)	260,000
Doris F. Amero (2)	66,000	Pioneer (7)	7,500
Eddie & Lulu M. (7)	19,500	Ponce De Leon (4)	3,500
Estrela (1)	240,000	Priscilla (1)	500
Eva M. Martin (5)	4,500	Prosperity (7)	16,000
Eva II (7)	10,000	Rose & Lucy (5)	79,000
Falcon (10)	50,000	Rosemarie (5)	92,000
Florence & Lee (1)	100,000	Rosie & Gracie (7)	105,500
Flow (1)	188,000	Sacred Heart (4)	5,500
Frances R. (8)	102,500	St. Anna Maria (8)	90,000
Frankie & Jeanne (5)	6,500	St. Anthony (1)	109,000
Gaetano S. (1)	50,000	St. Cabrini (3)	42,000
Gertrude E. (2)	1,000	St. Francis (9)	34,500
Giacoma (8)	11,000	St. John (7)	12,000
Golden Dawn (5)	19,000	St. Joseph (4)	27,000
Golden Eagle (1)	10,000	St. Mary (9)	102,500
Helen M. (1)	8,000	St. Nicholas (2)	224,000
Hilda Garston (1)	92,000	St. Peter (7)	73,000
Holy Name (3)	24,500	St. Providenza (8)	16,500
Ida & Joseph (2)	15,000	St. Rosalie (6)	88,500
Immaculate Conception (3)	33,000	St. Stephen (1)	1,000
Irma Virginia (8)	15,000	St. Terese (4)	50,000
Jackie B. (5)	63,000	Salvatore & Grace (5)	85,000
Jackson & Arthur (6)	11,500	Santa Lucia (4)	9,500
Jennie & Lucia (1)	16,000	Sebastiana C. (8)	126,000
Joseph & Lucia (2)	275,500	Serafina N. (6)	66,500
Josie II (4)	14,000	Serafina II (6)	89,000
Judith Lee Rose (2)	555,000	Star of the Sea (2)	39,000
Killarney (2)	5,000	Sunlight (1)	172,000
Kingfisher (1)	223,000	Theresa M. Boudreau (1)	185,000
Kurta (3)	2,000	Tipsy Parson (2)	3,000
Lady of the Rosary (5)	70,500	Trimembral (3)	9,500
Linda B. (7)	21,000	Vagabond (3)	74,000
Little Flower (9)	88,500	Victoria (5)	3,500
Little Joe (7)	10,000	Villanova (1)	235,000
Lone Ranger (1)	500	Vincle N. (1)	20,000
		Virginia Ann (6)	41,000
		White Owl (8)	14,500

Scallop Landings (Lbs.)

Cap'n Bill (1)	3,500	Margie M. (1)	2,000
Francis L. MacPherson (1)	10,000		

PORTLAND, ME.

Agnes & Elizabeth (4)	123,000	Marie H. (2)	6,000
Alice M. Doughty II (2)	40,000	Marion (1)	6,000
Alton A. (1)	3,000	Mary & Helen (1)	4,500
Andarte (5)	72,500	Mascot (1)	3,000
Blanch R. III (1)	1,000	Medan (1)	250,000
Challenger (7)	10,500	Minnie (2)	352,000
Courier (4)	161,500	Quincy (1)	65,000
Crescent (8)	15,500	St. George (2)	290,000
Dorchester (2)	165,000	St. Joseph (1)	14,000
Dorothy & Ethel II (3)	24,000	Silver Bay (1)	141,000
Elinor & Jean (7)	93,500	Theresa R. (3)	199,000
Ethelina (2)	92,000	Vandal (4)	100,000
Gulf Stream (2)	242,000	Vida E. II (3)	25,000
Kennebec (4)	130,000	Wawenock (2)	359,000
Laurence Scola (2)	14,000	Winthrop (1)	45,000

Scallop Landings (Lbs.)

Adele K. (2)	10,000
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NEW BEDFORD

Adventurer (4)	21,200	Janet & Jean (3)	40,500
Anastasia E. (1)	4,000	Jeannie Ann (2)	24,700
Annie Louise (1)	8,000	Jimmy Boy (2)	28,300
Annie M. Jackson (2)	10,000	Joan & Tom (1)	14,300
Barbara M. (1)	15,500	Katie D. (2)	58,000
Capt. Deebold (1)	8,200	Marie & Katherine (2)	23,100
Carl Henry (3)	61,200	Mary E. D'Eon (1)	13,200
Charles E. Beckman (2)	23,200	Mary Tapper (2)	32,000
Christina J. (1)	14,000	Midway (3)	94,900
Christine & Dan (1)	14,500	Molly & Jane (1)	11,500
Comber (2)	22,200	Nautilus (2)	106,500
Connie F. (3)	93,400	Pauline H. (3)	197,100
Dauntless (3)	34,200	Phillip & Grace (2)	36,000
Elva & Estelle (2)	11,000	Phyllis J. (2)	14,900
Elva L. Beal (2)	12,000	Roann (1)	12,000
Eugene & Rose (2)	30,800	Rosemarie V. (1)	4,600
Eunice-Lillian (2)	30,500	Rush (2)	33,000
Gannet (3)	150,800	R. W. Griffin, Jr. (3)	61,000
Gertrude D. (2)	20,500	Shannon (2)	18,500
Gladys & Mary (2)	31,000	Solveig J. (2)	88,500
Growler (3)	65,500	Sonya (2)	16,000
Harmony (1)	13,000	Stanley B. Butler (3)	165,100
Hope II (3)	57,500	Sunbeam (2)	26,500
Huntington Sandford (1)	4,300	Venture L. (4)	52,800
Invader (2)	62,800	Victor Johnson (3)	31,000
Ivanhoe (1)	11,000	Viking (2)	61,000
Jacintha (2)	78,600	Whaler (2)	36,500

Scallop Landings (Lbs.)

Aloha (1)	7,800	Louis A. Thebaud (1)	5,200
Alpar (2)	16,200	Louise (1)	11,000
Amelia (2)	16,800	Lubenray (1)	5,500
B. & E. (1)	7,800	Malene & Marie (1)	9,000
Barbara (1)	4,500	Mary Ann (1)	10,300
Bobby & Harvey (2)	10,000	Mary J. Hayes (1)	7,000
Bright Star (2)	20,000	Mary J. Landry (1)	8,100
Camden (1)	9,200	Monte Carlo (3)	25,000
Caracara (1)	10,000	Moonlight (2)	15,000
Carol & Estelle (2)	13,500	Nancy Jane (1)	4,000
Catherine & Mary (2)	16,300	Nellie Pet (2)	15,000
Charles S. Ashley (2)	16,200	Newfoundland (2)	20,700
Debbie Jo-Ann (2)	20,000	Noreen (1)	11,000
Dorothy & Mary (2)	11,800	Palestine (1)	2,000
Edgartown (2)	17,500	Pearl Harbor (1)	9,200
Eleanor & Elsie (1)	7,000	Pelican (2)	17,500
Elizabeth N. (1)	8,000	Porpoise (2)	12,200
Ethel C. (1)	7,500	Ruth Moses (2)	15,000
Eugene H. (2)	16,500	Santa Cruz (1)	1,800
Fairhaven (1)	9,700	Sea Hawk (2)	7,800
Falcon (2)	11,500	Sea Ranger (2)	16,500
Fleetwing (1)	5,000	Sippican (2)	19,800
Jerry & Jimmy (2)	18,800	Smilyn (2)	12,800
John G. Murley (2)	15,500	Stella Maris (1)	1,800
Josephine & Mary (3)	11,800	Ursula M. Norton (2)	20,600
Kingfisher (2)	20,000	Vivian Fay (3)	23,200
Laura A. (2)	15,500	Wamsutta (1)	8,500
Lauren Fay (2)	19,300	William D. Eldridge (2)	13,500
Linus S. Eldridge (2)	21,300		

WOODS HOLE, MASS.

Annie Louise (1)	1,100	Madeline (3)	9,400
Adventurer (1)	7,200	Phyllis J. (1)	5,700
Arnold (6)	17,700	Priscilla V. (2)	10,900
Bernice (1)	3,300	Roann (2)	4,500
Cap'n Bill (2)	30,400	Rush (1)	8,700
Cap'n Bill II (1)	19,000	Southern Cross (2)	11,000
David & James (1)	700	Three Bells (2)	10,700
Ebenezer (1)	1,000	Vagabond (1)	5,100
Elva & Estelle (4)	7,100	Viking (2)	4,600
Gertrude D. (1)	7,100	Winifred M. (1)	2,800
J. Henry Smith (1)	1,400		

Scallop Landings (Lbs.)

B. Estelle Burke (1)	2,700
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STONINGTON, CONN.

Bette Ann (11)	5,300	Marise (11)	6,700
Carl J. (1)	1,200	Mary H. (1)	200
Carolyn & Gary (11)	11,900	New England (2)	1,900
Connie M. (6)	4,400	Old Mystic (12)	10,400
Irene & Walter (15)	20,300	Our Gang (2)	5,200
Jane Dore (11)	9,900	Theresa (1)	1,100
Lt. Thos. Minor (11)	15,500	Weezy May (3)	2,300
Lisboa (1)	2,500	William B. (6)	14,200

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BY **Bendix**

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MODEL MR-3B



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This new radar by Bendix incorporates features you will only find on radars costing many times as much. Bendix now gives you in the low cost MR-3B dependability, long life and easy maintenance.

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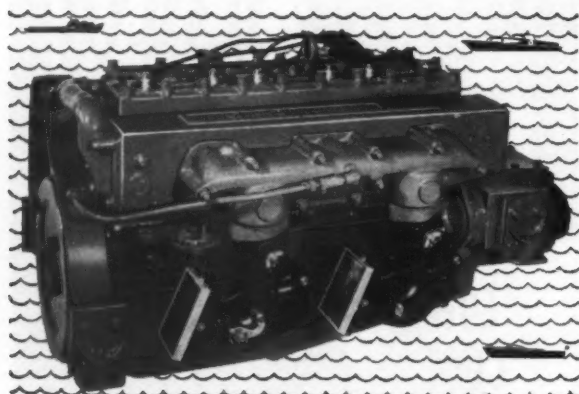
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... packs a wallop, yet weighs only 940 lbs.!

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Thoroughly tested under marine conditions, the *Model MCL* gives your runabout, utility boat, or cruiser a new smoothness and ease of operation, with high torque at low rpm, unexcelled idling characteristics, rugged dependability in use.

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SPECIFICATIONS

Cylinders.....6	Piston displacement.....339.2 cu. ins.
Bore.....4 ins.	Compression ratio.....7.22:1
Stroke.....4½ ins.	175 hp.....at 3400 rpm

FEATURES

Chris-Craft Model MCL 175-hp engine features: specially designed manifold for high efficiency; water-jacketed intake for smooth 500 rpm idling; 291.58 foot-pounds of torque at 1800 rpm; corrosion resistant throughout; three-pinion, high-ratio reverse gear for dependability; full-rotating exhaust valves for longer valve life; pressure-fed bearings; high lift camshaft; latest type self-priming fuel pump (also fitted for hand priming); scientifically designed combustion chamber, high turbulence for complete use of the gas mixture; aluminum alloy pistons with full-floating pins and the most advanced piston ring combination; simple, compact, dependable three-bearing reduction gears in ratios of 1.50:1 and 2.03:1 available (also opposite rotation).

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Barbara & Gail (1)	25,000	Golden Eagle (3)	102,500
Carol-Jack (3)	79,100	Hazel B. (3)	126,800
Catharine C. (2)	41,900	Joseph S. Mattos (3)	136,500
Charlotte M. (4)	137,000	Lady of Good Voyage (4)	156,500
Clipper (5)	227,400	Manuel P. Domingoes (1)	40,000
Edith L. Boudreau (4)	136,900	Miriam A. (3)	59,500
Evelina M. Goulart (3)	141,000	Teresa & Jean (3)	95,300
Felicia (2)	61,000	Tina B. (3)	147,000
Figueira Da Foz (3)	106,700		

Scollop Landings (Lbs.)

Beatrice & Ida (2)	13,100	Norseman (1)	5,500
Brant (2)	17,000	Richard Lance (2)	12,700
Enterprise (1)	8,000	Rosalie F. (1)	9,400
Florence B. (2)	13,400	S. No. 31 (2)	12,900
Maridor (2)	16,100		

ROCKLAND, ME.

Araho (3)	188,000	Flow (2)	16,000
Dorothy & Betty (1)	19,000	Helen Mae II (4)	15,200
Dorothy & Betty II (2)	24,000	John J. Nagle (2)	164,000
Elin B. (3)	80,500	Little Growler (4)	73,000
Flo (1)	64,000	Mabel Susan (3)	45,000

Scollop Landings (Lbs.)

Jeanne D'Arc (2)	15,500	Rhode Island (2)	8,200
Pocahontas (2)	15,000		

BOSTON

Agatha (3)	144,100	Mary Ann (1)	29,100
Agatha & Patricia (3)	166,400	Mary Rose (1)	72,500
Angie & Florence (3)	35,200	M. C. Ballard (2)	198,500
Arlington (3)	542,200	Michael G. (3)	31,400
Atlantic (2)	228,000	Michigan (2)	281,100
Baby Rose (3)	141,700	Morning Star (3)	75,800
Bay (3)	373,200	Mother Frances (3)	94,700
Bonaventure (2)	121,200	Nancy B. (1)	8,200
Bonnie (2)	299,500	New Star (2)	230,200
Bonnie Billow (2)	237,100	Notre Dame (3)	122,900
Bonnie Breaker (2)	213,100	Ocean Clipper (4)	128,900
Bonnie Breeze (1)	99,500	Ocean Wave (3)	78,700
Brighton (3)	388,000	Ohio (2)	174,500
Buzz & Billy (4)	127,200	Olympia (3)	75,400
Cambridge (3)	420,000	Olympia LaRosa (4)	123,500
Carmela Maria (1)	7,000	Pam Ann (2)	158,900
Catherine B. (3)	13,400	Patty Jean (2)	305,700
Charlotte G. (1)	15,500	Phantom (3)	415,700
Columbia (3)	152,700	Pilgrim (3)	156,100
Comet (2)	201,500	Plymouth (2)	190,000
Eagle (2)	152,400	Puritan (3)	144,400
Elizabeth B. (2)	189,500	Racer (3)	441,800
Emily H. Brown (2)	245,500	Raymonde (2)	149,900
Flying Cloud (2)	302,500	Red Jacket (2)	301,500
Four (2)	181,500	Rosa B. (3)	336,600
4-H-823 (3)	8,800	Rosalie D. Morse (1)	122,700
Geraldine & Phyllis (3)	113,900	Rosie (5)	53,300
Holy Family (3)	167,200	Rush (3)	341,500
Ida & Joseph (3)	99,000	St. Joseph (3)	103,300
Jane B. (2)	162,900	St. Victoria (3)	154,100
J. B. Junior (3)	333,500	Santa Maria (3)	94,100
J. B. Junior II (1)	1,500	San' Antonio II (1)	4,200
Jennie & Lucia (2)	74,800	Santa Rita II (2)	12,400
Josephine F. (2)	13,300	Star of the Sea (1)	24,800
Josephine P. (1)	30,000	Swallow (2)	257,900
Josephine P. II (3)	75,100	Texas (2)	201,000
Lady of the Rosary (1)	29,100	Thomas D. (3)	149,900
Leonard & Nancy (2)	67,900	Thomas Whalen (2)	206,800
Linda & Warren (1)	18,500	Villanova (3)	105,100
Magellan (3)	82,300	Vincie N. (2)	61,600
Maine (2)	323,500	Weymouth (2)	273,500
Manuel F. Roderick (3)	169,300	Wild Duck (3)	163,000
Maria Christina (1)	7,300	William J. O'Brien (3)	379,000
Mary & Joan (2)	177,500	Winchester (3)	298,000
		Wisconsin (3)	521,200

SEATTLE

Halibut Fleet Fishery

Angeles (1)	11,000	Lane (1)	5,000
Dorothy II (1)	5,395	Radar (1)	3,500
Kiska (1)	5,297		

Alabama Boats Make Good Red Snapper Catches

Star Fish & Oyster Co. of Mobile reported good red snapper catches in March despite bad weather. Their new boat *Lisa G.* returned from her maiden voyage to Campeche Banks with a nice catch of 23,000 lbs. of red snapper and grouper. Their *Eulalie G.* brought in 22,000 lbs. and the *Arthur G.* returned with an 8500 lb. catch, which was fair considering that she is a small boat. A company representative stated that, in spite of their good catches, market demands are exceeding supplies.

Freak Wind Damages Fishing Boats

A big blow, identified as a probable waterspout, recently struck the Oyster Bay area of Alabama, which is located just northwest of Gulf Shores across Pleasure Island, and caused heavy damage. Buildings, boat docks and several fishing boats were hit hard by the waterspout which covered an area a quarter of a mile wide.

Cold Weather Causes Shrimp Scarcity

Over 200 shrimp boats were idle in the Alabama Gulf Coast area in late March because of a shortage of shrimp in Mobile Bay. Heavy rains and continued cold weather contributed to the situation.

Capt. Paul Wright of Bayou la Batre said the only place shrimp were being taken in any amount was off the mouth of the Mississippi River and in deep waters of the Gulf of Mexico.

Albert Stafford, who operates several boats from the Mobile Wharf area, said the water has to be warm and salty before shrimp can be taken in the bays. Rains have made the bay "cool and fresh".

William Atkins of Deer River stated that despite the heavy rains, good catches of fresh-water fish have been made in recent weeks from streams off Mobile Bay.

The idle shrimp boats are at Bayou la Batre, Bon Secour, Mobile, and at various places along Mobile Bay. Some boats were oystering, but most were waiting for good weather. The fishermen expect plenty of shrimp in the Bay by mid-May.

Proposed Ecuador Regulations Would Affect Foreign Boats

The U. S. Embassy in Ecuador reports that at the First National Fishing Congress, held recently at Quito, Ecuador, several recommendations which would affect foreign fishing boats were made. These include the following:

That operation of factory boats and mother boats in Ecuadorian waters be prohibited;

That bait fishing by groups of boats be prohibited unless the boats are at least a half a mile apart;

That domestic fishing companies be prohibited (beginning two years after passage of the proposed decree incorporating this recommendation) from chartering foreign flag vessels unless they own at least one Ecuadorian flag vessel for each foreign vessel chartered;

That measures be taken to restrict imports of foreign-processed fish products, provided domestic fishing industry adopts production and price policy justifying such protection;

That no new shrimp concession be granted, that foreign flag shrimp fishing vessels now chartered by domestic companies be naturalized within six months, and that the Fishing and Hunting Department be empowered to regulate the number of shrimp vessels in use according to the amount of investment made by each company;

That foreign fishing technicians no longer be required to obtain a residence carnet.

Resolutions also were passed endorsing the policy on territorial waters pursued by the Ecuadorian Government.

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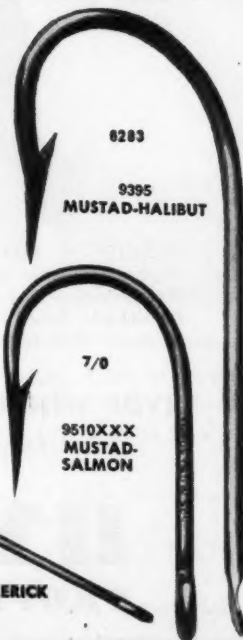
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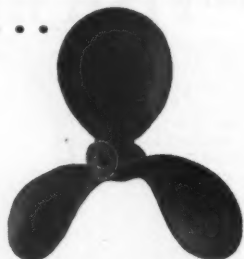
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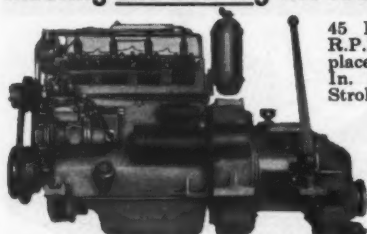
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Stroke: 3 3/4 In.

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Growing Time of Lobsters

(Continued from page 23)

5. To mate such lobsters as reach sexual maturity, ultimately producing a second generation of laboratory-reared lobsters.

6. To establish a technique of experimentally raising young lobsters to an advanced stage of development under laboratory conditions.

At the outset relatively few fry were retained for the experiment, and of the 1951 year class only four individuals now remain. In view of the satisfactory results obtained over past several years, it has been decided to reserve 30 or more young from each season's hatch, lack of space being the limiting factor as regards numbers of young lobsters held.

Small Lobsters Selected at Random

Lobster fry to be kept for growth rate studies were taken at random from the rearing tanks, parentage unknown and individuals probably unrelated to each other. Those selected at the beginning of the experiment in 1951 came from the June hatch. Subsequent year classes were from the July hatch, and in 1955 two groups were selected, one from the earliest and the other from the latest possible spawning. Comparisons as to growth and survival will be made.

Since young lobsters frequently have been observed to be their own worst enemies when confined, it was decided to segregate each lobster and this procedure has been followed consistently. Isolation was accomplished by constructing a wooden trough 5' long and 6" wide inside. This was divided by Saran plastic screens, 16 meshes to the inch, into compartments 6" x 8" x 4" deep.

A single fifth or sixth stage lobster was placed in each compartment, and sea water from the station system was supplied at the rate of approximately 60 gallons per hour at one end of the trough, the water running through the several compartments in succession to an overflow pipe at the opposite end. Food was provided daily during the warm part of the year, and less frequently during the cold months when the animals were inclined to be inactive. Availability of food at a relatively constant level was thus assured.

It was generally observed that after eating its fill a lobster would ignore the unconsumed portion of food, but would feed again later on a fresh supply. During the early larval stages all fry were fed on finely ground beef liver, a standard hatchery practice. After segregation, the experimental lobsters were fed small fragments of alewife, a readily available species of fish. A sufficient amount of this was kept frozen for use during the Spring, Summer and Fall months. When the supply became exhausted, as it usually did in the late Fall, various species of shellfish, such as quahaugs, clams and scallops, were fed with good results.

Larger Trough Built

At the end of the first experimental year a larger trough was built on the same general plan as the original, having compartments measuring 12" x 10" x 6" deep. Water flow was maintained at 60 gallons per hour, and the feeding schedule continued as above. The original rearing trough was utilized for the accommodation of the 1952 year class and a second, identical trough was built to take the additional fry held from the 1952 hatch.

Larger tanks were subsequently provided for the three- and four-year-old lobsters, three-year-olds each occupying one-half of a 16" square rearing tank and four-year-olds given an entire 16" tank apiece. The principle of segregation was adhered to throughout the experiment.

During the period of the experiment all lobsters involved were disturbed as little as possible. The only departure from this rule was in changing them from one tank to another to make room for another year class. In making carapace measurements the cast shell always was measured rather than the living animal.

Gloucester Boat-Loan Applications to be Pushed

The Small Business Administration office in Boston is gearing for the processing of loan-applications from Gloucester boat-owners. The New England regional director, Edward J. Stewart, met March 29 with Atty. Solomon Sandler, secretary of the Gloucester Fisheries Commission, and discussed in detail the applications of three Gloucester draggers. These three boats will be used as test cases, to see how the machinery of the Administration is geared to handle the problems of the fishing industry. Unless a matter of policy is involved, loan applications up to \$50,000 can be handled directly in Boston.

The action of the Small Business Administration was the direct outcome of a trip to Washington earlier in the month by the Gloucester Fisheries Commission, which met with Presidential Assistant Brice M. Harlow, Dr. Gabriel Hauge, Economic Advisor to the President, Congressman Bates, Senator Kennedy, and a representative of Senator Saltonstall.

According to the Gloucester Fisheries Commission, a permanent solution of the fishing industry's problems would be acceptance by the President of Tariff Commission recommendations for restrictive action with respect to imports of groundfish fillets.

The Fisheries Commission's recommendations for a temporary solution of the industry's problems consist of the following: 1. A program of loans for current operational costs of fishing vessels; 2. Establishment of a Government underwriting insurance office for all or part of the vessel insurance so that a favorable rate could be charged; 3. A program of loans for construction of vessels to be amortized over the estimated life of the vessel and with a minimum of equity capital.

Dragger "Maria Immaculata" Goes Down

Capt. Gus Sanfilippo of Gloucester and his crew of five were rescued at sea last month when their dragger the *Maria Immaculata* sank near Scantum, a whiting fishing ground about nine miles northeast of the Cape Ann lighted buoy. A few days after the rescue Capt. Sanfilippo was fitting out the dragger *Margaret and Marie* to continue shore fishing.

February Fish Landings Show Gain

The February landings of fish at Gloucester, estimated at 7 million pounds, were up by about 3 percent over the February 1955 total of 6.8 million pounds. The catch for the month consisted of 59 percent ocean perch, as compared with 53 percent in February 1955.

Protest Closing of Immigration Office

The *Estrela*, offshore fishing dragger, was the first victim of the Immigration Service's economy drive. The Gloucester office is now closed, and all boarding of boats from foreign ports will be handled from the Boston office. Any boat that touches at a foreign port must be cleared before her crew can go ashore or the hatches be unsealed.

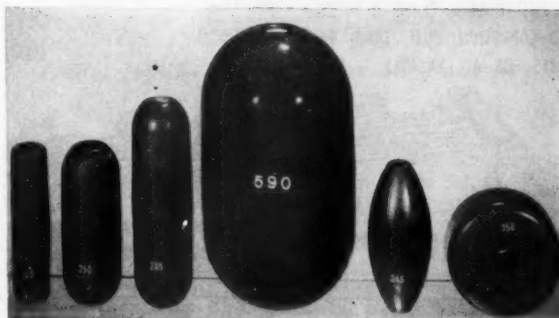
The *Estrela*, during the course of her 21-day trip, had to go into a foreign port for oil. Thus, when she arrived in port at 6 in the morning, she had to wait until 10 before the Boston agent arrived to clear her.

Master Mariners Re-elect Lafford

Capt. Gilbert R. Lafford, retired fishing skipper, was re-elected president of the Gloucester Master Mariners Assoc. for his seventh term. Other officers elected are: Capt. Thomas J. Benham, vice-president; Rudolph G. Ojan-takenen, treasurer; and Everett B. Lowe, secretary.

Directors are Captains John R. Morash, Collin S. Powers, Charles Nelson, Howard H. Tobey, Edward Lasley, A. Mansfield Conrad and Harry R. Clattenburg.

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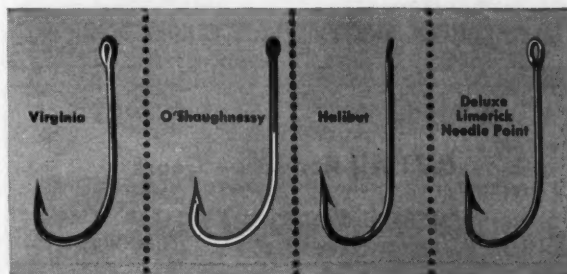
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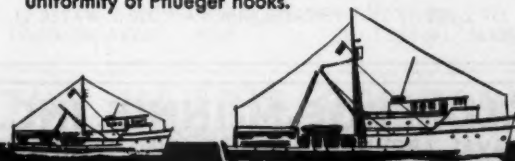
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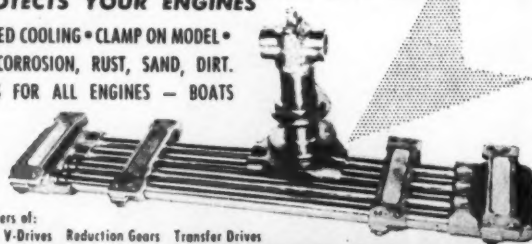
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North Carolina Starts Big Oyster Planting Program

The State Commercial Fisheries Division has launched the largest oyster planting program ever to be undertaken in a single year. Seed oysters, 150,000 bushels of them, are being placed in specially-selected waters of Carteret, Pamlico, Hyde, Dare, Onslow, Brunswick, Pender and New Hanover Counties. The first of the seed oysters were planted early last month.

In May the planting of oyster shells will start. Last year some 36,000 bushels of oyster shells were planted in areas known to be good for the propagation of oysters.

Since the oyster rehabilitation program started in 1947 there have been 783,050 bushels of shells placed in more than 60 different localities.

Shrimp Seen as Best Processing Possibility

William A. Ellison, for eight years director of the North Carolina Institute of Fisheries Research, has been engaged in an exploration of the possibilities of fish processing in North Carolina since last July. In his report he stated that the greatest immediate opportunity for fish processing in North Carolina lies in shrimp in package form.

The quality of the North Carolina shrimp is unexcelled. These shellfish could be packaged in various forms—breaded, split-shell, peeled and deveined or headed green and frozen.

Good opportunities also exist for the expansion of the crab industry, but this will depend upon the development of merchandising techniques by the North Carolina producers.

Urges Dredging of Oregon Inlet

Congressman Herbert C. Bonner of North Carolina appeared before a House Appropriations subcommittee recently to urge an appropriation of \$570,000 for dredging a channel through Oregon Inlet, N. C., so as to permit free movement of fishing vessels and other craft. Over 110 fishing trawlers are involved, according to Congressman Bonner, plus many other fishing craft, including the menhaden fleet.

He cited an instance where a trawler was held outside the inlet for three days because of low tide and was unable to deliver its catch. Bonner proposes a 14' channel, 200' wide.

A number of North Carolina State officials and W. H. Potter, a menhaden industry representative, also appeared at the hearing, along with Charles Jackson, general manager of the National Fisheries Institute.

Giant Grouper Landed

The largest grouper believed caught by county fishermen was landed early last month by Arthur Lewis of Morehead City, a crewman aboard the *William J.*, skippered by Capt. Lloyd Reed. The grouper, weighing in at 187 pounds, was a monstrous fish and was caught by Lewis using a wire line on a hand winch.

The total catch of the *William J.* was 861 pounds, most of which was red snapper. One king mackerel also was reported in the catch, unusual for this time of year.

Morris Resigns as Fisheries Committee Head

Cecil O. Morris of Atlantic has resigned as chairman of the State's Commercial Fisheries Committee, Board of Conservation and Development, because of his health. Mr. Morris had been affiliated with the Committee for several years.

Big Bluefish Landed

Large bluefish, some weighing up to 8 and 10 pounds each, were taken in trawl nets off Cape Hatteras recently, according to Clyde Potter, fish dealer and trawler fleet

operator of Belhaven. Reports of the big fish also have come from the Hatteras area.

Styron Lost at Sea

Albert Styron, veteran commercial fisherman of Ocracoke, was given up as lost last month when he failed to return from an oyster planting trip. It was believed that he may have suffered a heart attack.

An 18-ft. skiff Mr. Styron had with him was found at Rodanthe, about 45 miles north of Ocracoke. Mr. Styron was towing the skiff with his 24-ft. powered boat.

Winds Hamper Shad Fishermen

The hard winds that prevailed on the North Carolina coast early in March did considerable damage to pound nets belonging to Manns Harbor fishermen. Wanchese fishermen escaped with only slight losses. Biggest damage from the blow was the set-back in the catch of shad, which fell considerably below normal, and remained so for about a week.

Crabbers made fairly good catches from baited pots last month in the Wanchese area.

New Crab Plant Nears Completion

Construction is nearing completion at Oriental on the spacious concrete block structure that will house Whorton Brothers Seafood, a crab-packing plant owned and managed by Fred A. Whorton, Jr. The new plant will employ between 100 and 125 women workers. Present plans call for operation at least 10 months out of the year.

According to the owner, between 30,000 and 50,000 pounds of crabs are to be handled daily, depending upon the available supply. Most of the crabs used are caught in lower Neuse River, but this source of supply is supplemented by additional crabs brought in from Virginia.

New Jersey Fishermen Oppose Clam And Oyster Dredging in Lower Bay

A bill which would open the Delaware Bay south of High's Beach to allow commercial large-scale dredging of clams and oysters was discussed last month at a meeting of the officers of the Landowners, Trappers and Fishermen's Assoc. of Cape May, Atlantic and Cumberland Counties.

Opponents of the proposal cite great losses to the individual clammer and oysterman. They claim, too, that dredging of the four-fathom slough, about three miles off the coast, would ruin the seed beds and eventually eliminate the oyster from the Bay. Dredging of the area also would ruin the drum fishing in the Bay, they claim.

Landings for January Show Gain

Landings of fish and shellfish at New Jersey ports during January totalled 3.4 million pounds valued at 700 thousand dollars to the fishermen. This was the first month in which values were reported for fishery products landed in New Jersey. Compared with the landings reported for the corresponding month of last year, there was a gain of 10 percent.

Much larger landings of fluke during January of this year accounted for most of the increase. Bay scallops appeared in quantity for the first time in many years in the Barnegat Bay area of Ocean County. Production of this shellfish item during January amounted to 90,000 pounds, valued at \$82,000.

Cape May County led all others in volume landed during the month, with 1.4 million pounds, but placed second to Cumberland County in the total value of fishery products handled. Oysters were the principal cause for the high value credited to Cumberland County.

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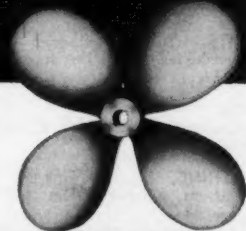
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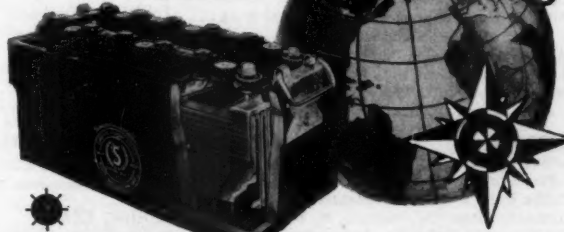
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Eleven dories will be carried for line-fishing, and also two aluminum motor lifeboats. The motor lifeboats will tow dories to fishing grounds and transport catch back to mother-ship, which will be trawling near-by.

MEXICAN SHRIMP FISHERY in Gulf of Baja California has made a most surprising comeback, especially in fishing areas along east coast of Gulf of California as far south as Mazatlan. Imports of frozen shrimp cleared in United States border town of Nogales, Ariz. from September 1, 1955, through January 22, 1956, totaled 20,439,000 pounds, as compared with 8,533,400 pounds year ago.

FISHERIES COURSE for Canadians was given March 13 to 25, when 30 men went back to school at University of British Columbia in Vancouver. The course, which was initiated last year under grant from Canadian Department of Fisheries, aims to broaden knowledge of practicing fishermen beyond their specialized branch.

SOVIET UNION AND POLAND are conducting extensive herring fishing operations in North Atlantic Ocean and North Sea. Soviet Union has fleet of 350 craft with four large motherships. The Soviet herring catch has been large and is estimated to be close to 1.5 million barrels.

Poland is reported to have 525 vessels and mothership of 800 tons in fishing areas of Atlantic Ocean and North Sea. Polish fleet has set goal of 1,286,000 barrels in 1956.

MEXICAN COAST GUARD is intensifying its campaign against foreign fishing fleets in Mexican coastal waters, and intends to acquire sea-planes for patrolling.

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Matched pair of Fairbanks-Morse, Model 46A, direct reversible, 300 hp., 776 rpm., with direct connected reduction gear, 2:1, output on shaft 388 rpm.

Matched pair of 350/460 hp., 300-400 rpm., Superior 6-cylinder, 12.5 in. bore, 16.5 in. stroke, direct reversing.

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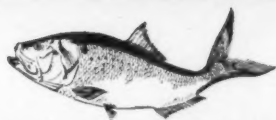
43' dragger, 6-71 G.M. Diesel. Fully equipped with nets, Ray Jefferson radiotelephone, and Bendix depth recorder. Phone Bernard Olsen at Point Pleasant, N. J., 5-2363-W.

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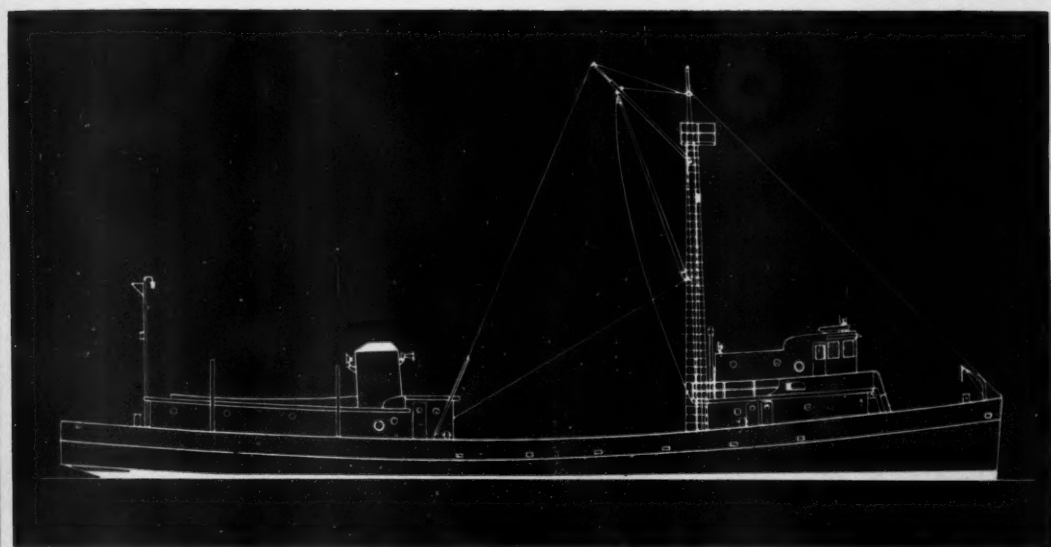
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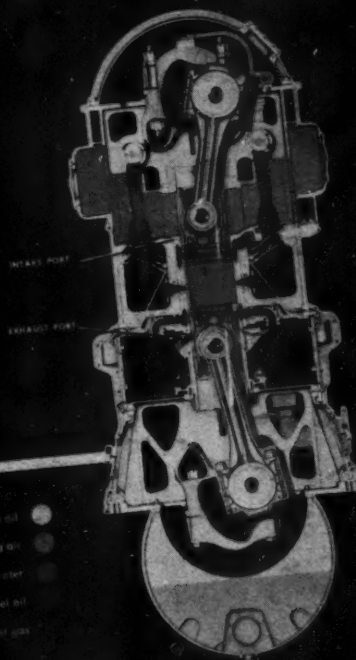
The Dependable Opposed-Piston Diesel Engine

1. Smooth flow of fresh air enters cylinder from below through intake ports—no interference by valves because no complicated valve train and timing.
2. Compression occurs in the cylinder by the rising exhaust ports, thus cooling air before push. This preheating of port charging system provides greater horsepower and increases thermal efficiency to the maximum to provide output in fuel economy.
3. Compressing down air into the spherical combustion chamber formed by the two piston crown domes produces a 20/1 air charge.
4. Injection of fuel injected into the 20/1 air charge is obtained by heat of compression. The resulting pressure rise against both piston crowns provides smooth, vibrationless power. Since load pressures are exerted in opposite directions, the forces are balanced—only minimum foundations are needed.
5. Power thrust developed is transmitted to two crankshafts, in completely proof construction. "NO-SHOOT" bearings carry the power and avoid crankshaft journals. "NO-SHOOT" power is delivered in the opposed piston design, because one piston tends the other by equal degree of crankshaft rotation.
6. Exhaust port openings ring the cylinder lower, providing scavenging action for burned gases re-ventilation of power by operating complicated push rods, rocker assemblies and valve adjustments. No valves—no valve train—no springs to break—no valves to grind.
7. Intake port openings provide and clean air order. Lower pressure to purge burned gases by the scavenge exchange system, thus all exhaust gases are swept out ahead of the fresh air flow in one direction through the cylinder. Again, simple two-cycle design with no valves provides highest operating efficiency.

CONSTRUCTION

Special attention to engineering design of each of the above phases that the design has developed the OPPOSED PISTON engine as a low fuel oil fuel cost, low maintenance and cost. Although these add up to a lowest cost, the simple mechanical principles make possible the modification of the engine as a dual fuel unit, or a high compression spark ignition unit, type cylinders for burning natural gas, sewage gas, compressed propane or gasoline have added versatility horsepower or economy.

*no other engine so right for all classes of service



CYCLE OF EVENTS

1. Fresh air enters cylinder.
2. Ports close, compression.
3. Compression provided by air charge.
4. Fuel injected, ignited.
5. Power develops by expansion.
6. Exhaust ports open to allow exhaust.
7. Intake ports open to purge burned gases.

Here in Graphic Full Color is a detailed working model of the Fairbanks-Morse Opposed-Piston Diesel Engine—and it's yours free for the asking.

With the 8-inch operating cutaway in front of you, you can follow the complete operating cycle of this outstandingly successful heavy-duty engine designed for continuous service. Moving the disc at the right operates the model showing exact position of pistons, and color codes condition in the cylinder, throughout the entire cycle of events.

You'll also see the simplicity of the O-P that has no valves, intricate valve trains,

cylinder heads and gaskets—in fact, it has 40% fewer moving—wearing—parts than any comparable engine of equal horsepower.

If you are interested in dependable power with low operating and maintenance cost, send for your working model of the O-P diesel today! Simply attach this advertisement to your letterhead (or ask for O-P "Working Model") and send to Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Illinois.



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